DOCUMENT RESUME

ED 304 791 EA 020 816

TITLE Trends in Education Expenditures.
INSTITUTION Minnesota State Office of the Legislative Auditor, St. Paul. Program Evaluation Div.
PUB DATE Mar 88
NOTE 99p.
AVAILABLE FROM Publications, Office of the Legislative Auditor, 122 Veterans Service Building, St. Paul, MN 55155 (free; limit of 5 copies).
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Comparative Analysis; *Educational Resources; *Educational Trends; Elementary Secondary Education; Expenditure per Student; *Expenditures; *Financial Support; *Noninstructional Student Costs; Operating Expenses; Program Evaluation; Salaries; School District Spending; School Statistics; *State Aid; Statewide Planning
IDENTIFIERS *Minnesota

ABSTRACT

In May 1987, the Legislative Audit Commission for the State of Minnesota directed the Program Evaluation Division to examine noninstructional expenditures for elementary and secondary education. This report, the first of two, focuses on two questions: (1) Has the commitment of resources in Minnesota to instructional activities declined relative to that for noninstructional activities? and (2) How does Minnesota's commitment of resources compare to that of other states? Accordingly, after an executive summary, the first chapter of the report focuses on spending, and provides data on overall spending trends, spending by program area, types of expenditures, and variation among districts. The second chapter focuses on staffing and salary trends, and on variations in staffing and salary among districts. The third chapter provides national comparisons between Minnesota and the United States as a whole on expenditures, staffing, and salaries. Appended is a list of selected program evaluations conducted by the Program Evaluation Division for the State of Minnesota. (TE)

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ED304791

Trends in Education Expenditures

Program Evaluation Division
Office of the Legislative Auditor
State of Minnesota

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Trends in Education Expenditures

March 1988

Program Evaluation Division
Office of the Legislative Auditor
State of Minnesota

4

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STATE OF MINNESOTA
OFFICE OF THE LEGISLATIVE AUDITOR
VETERANS SERVICE BUILDING, ST. PAUL, MN 55155 • 612/296-4708
JAMES R. NOBLES, LEGISLATIVE AUDITOR

March 8, 1988

Representative Phillip J. Riveness, Chairman
Legislative Audit Commission

Dear Representative Riveness:

In May 1987 the Legislative Audit Commission directed the Program Evaluation Division to examine expenditures for elementary and secondary education, particularly those that are not directly related to classroom instruction. The commission wanted to know whether noninstructional spending was growing faster than instructional spending in Minnesota's schools.

The results of our study will be published in two stages. This first report focuses on two questions: (1) Has the commitment of resources in Minnesota to instructional activities declined relative to that for noninstructional activities? and (2) How does Minnesota's commitment of resources compare to that in other states? The report also provides information on how instructional and noninstructional spending, staffing, and salaries vary among school districts. A second report, to be published later this year, will examine the potential for more efficient and effective use of resources in a number of noninstructional areas.

We received the full cooperation of the Minnesota Department of Education in preparing this report. We also appreciate the cooperation of other agencies and groups that provided us with information.

This report was researched and written by John Yunker (project manager) and Jo Vos, with assistance from Mary Guerriero.

Sincerely yours,

James R. Nobles
Legislative Auditor

Roger A. Brooks
Deputy Legislative Auditor
for Program Evaluation

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TRENDS IN EDUCATION EXPENDITURES

Executive Summary

In Minnesota, elementary and secondary education receives a substantial share of state and local taxes. In 1987, nearly one-third of the state's overall budget was allocated to appropriations and property tax credits for public education. In addition, school districts received 44 percent of local property taxes. Total elementary and secondary expenditures in 1986 were approximately $3 billion.

One-third of the state's budget and 44 percent of local property taxes go to public education.

Both in Minnesota and across the nation, concern has been expressed that "noninstructional" spending in education has grown faster than instructional spending. Because of this growing concern, the Legislative Audit Commission directed the Program Evaluation Division to examine educational spending -- particularly "noninstructional" expenditures -- and to determine how much they have grown and whether there are ways for Minnesota school districts to be more efficient and cost-effective.

The results of our study will be published in two stages. This report focuses on statewide educational spending, staffing, and salaries. We asked the following questions:

- **How have Minnesota schools' commitment of resources to instructional activities changed over the last 10 to 15 years relative to that for noninstructional activities?**

- **How do instructional and noninstructional spending, staffing, and salaries in Minnesota compare to the rest of the nation?**

- **How do Minnesota spending, staffing, and salary patterns vary by school district enrollment and location?**

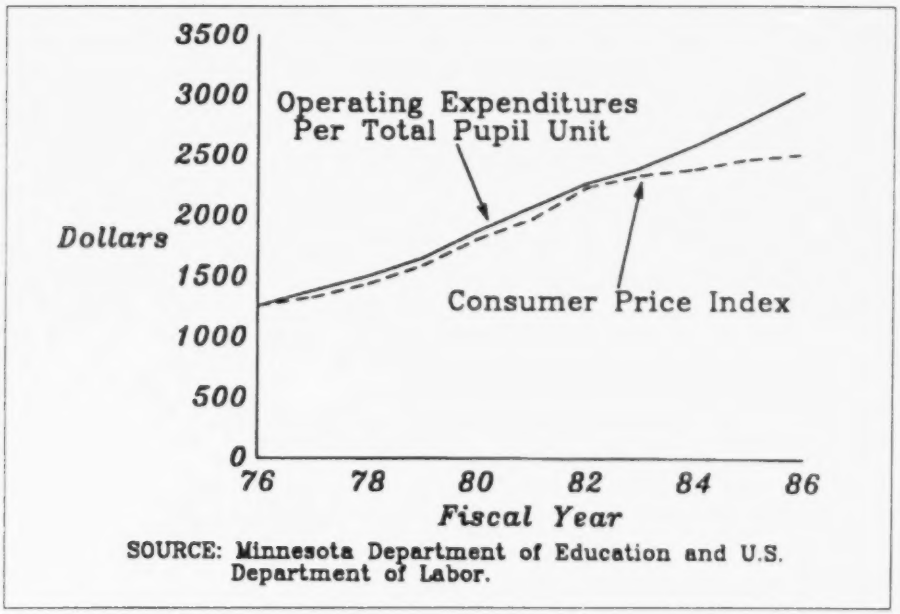
A second report, to be published later this year, will focus on specific issues of school district management and will examine the potential for more efficient and effective use of resources.

MINNESOTA TRENDS

Spending

We observed two significant spending trends. First, we found that, over the ten-year period ending in 1986, current operating expenditures per pupil unit grew by 142 percent compared to a 100 percent increase in the consumer price index for the Minneapolis-St. Paul area. As a result:

- **Operating expenditures per pupil unit grew by about 21 percent in real terms (constant dollars) between the 1975-76 and 1985-86 school years.**



SOURCE: Minnesota Department of Education and U.S. Department of Labor.

Growth in Operating Expenditures Per Pupil Compared to Inflation

During most of this period, increases in spending did not exceed the inflation rate by much. Most of the real growth in spending occurred in the last three years, when spending increased by 26 percent while inflation was less than 8 percent.

Second, we found that:

- **The share of spending going to instructional activities declined during the 1970s but has increased during the 1980s.**

It is difficult for several reasons to be precise about how the share going to instructional activities has changed since the early 1970s. These reasons include: (1) major changes that were made in the education accounting system

in 1980, (2) the omission of the employer's share of teacher retirement contributions and social security taxes from education expenditure data, (3) the lumping of other fringe benefits together with various noninstructional costs during the 1970s, and (4) the lack of a consensus on the definition of instructional activities.

Instructional spending has not lost ground to noninstructional spending.

However, it does not appear that there has been a major shift of resources between instructional and noninstructional activities. Our best estimate is that the share of operating expenditures going to instructional activities declined between 2 and 5 percentage points between the 1972-73 and 1979-80 school years and rose more than 3 percentage points between the 1980-81 and 1985-86 school years.

Some of these minor movements may reflect how average teacher salaries changed relative to inflation. Salaries grew slower than inflation rates during the 1970s but faster during the 1980s. Rapidly increasing fuel and food prices caused instructional salaries to lose ground to transportation and food service during the 1970s. During the 1980s, average teacher salaries increased faster than fuel and food prices, causing instructional activities to gain ground on activities that are more dependent on material costs.

Although instructional activities have not lost ground to noninstructional activities since the early 1970s, there appears to have been a shift among instructional activities. Available spending and staffing data suggest that the share of resources in regular education declined while the share in special education increased.

Staffing

Education is labor-intensive: about 80 percent of operating expenditures pay the salaries and fringe benefits of staff. Expenditures for licensed staff, including teachers, administrators, and support staff, account for at least three-fourths of all educational staffing costs. We examined changes in licensed staff relative to enrollment since the mid-1970s and determined how the number of administrators has changed relative to the number of teachers.

We found that:

- **Between the 1975-76 and 1986-87 school years, enrollment fell 19 percent while the number of licensed staff decreased by less than 8 percent. As a result, the number of licensed staff per 1,000 students grew 14 percent.**

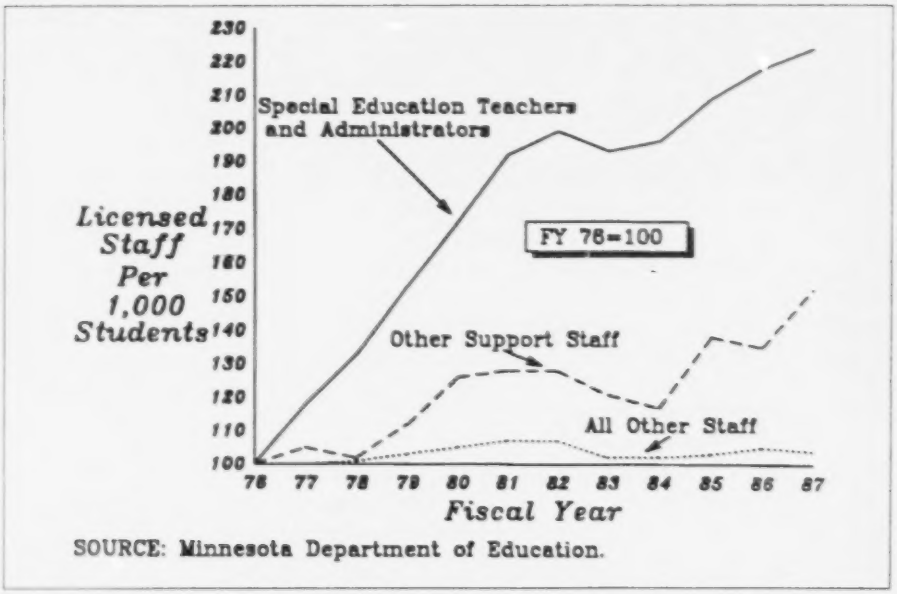
Most of the growth relative to enrollment occurred in a few categories:

- **The number of special education teachers and administrators per 1,000 students doubled.**

- **Other support staff (including psychologists, social workers, nurses, and others) grew by more than 50 percent relative to enrollment.**

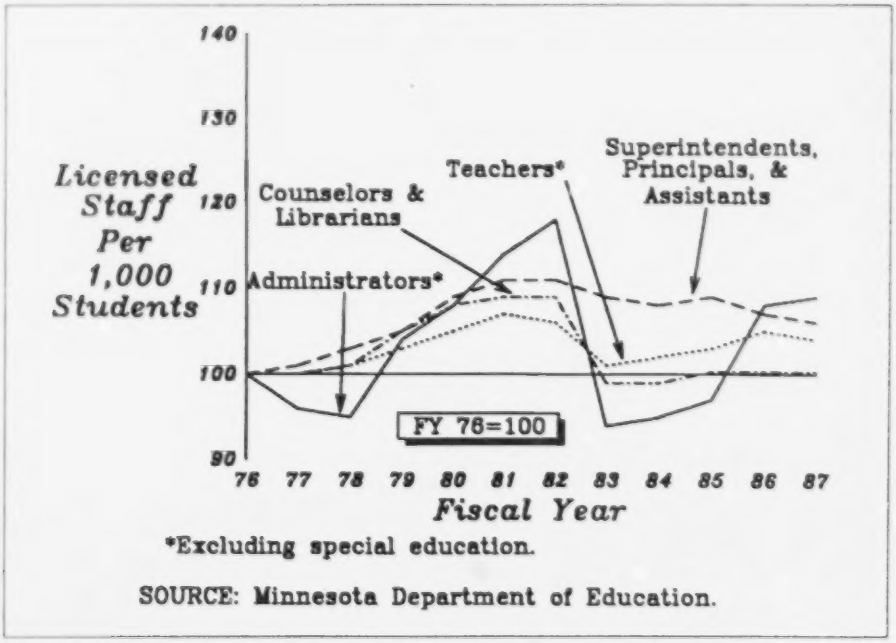
Administrative staffing levels have increased less than the average for other staff.

By contrast, other licensed staff grew by only 4 percent relative to enrollment. Superintendents, principals, and their assistants per 1,000 students grew by 6 percent, other administrators (excluding special education) increased 9 percent, and teachers (excluding special education) were up 4 percent. The number of counselors and librarians/media generalists did not change relative to enrollment.



SOURCE: Minnesota Department of Education.

Growth in Special Education Teachers and Administrators and "Other" Support Staff Relative to Enrollment



*Excluding special education.

SOURCE: Minnesota Department of Education.

Growth in All Other Licensed Staff Relative to Enrollment

The primary effect of these staffing trends has been a significant increase in the percentage of licensed staff working in special education. The percentage of licensed staff who are special education teachers or administrators has nearly doubled from 7.4 to 14.5 percent. That increase was almost completely offset by a decrease in the percent of licensed staff who are teachers but not in special education. That group declined from 80 to 73 percent of licensed staff. The share of staff who are administrators (excluding special education) declined slightly while the share who are support staff (counselors, librarians, and others) grew slightly.

The increase in special education staff came at a time when school districts were becoming subject to increasing federal and state mandates to fully and adequately serve handicapped students. In Minnesota, the growth in staff has in part been due to an increase in the number of students identified as handicapped and also due to a reduction in the number of special education students per special education teacher.

Salaries

From a review of salary data on licensed staff, we found that:

- **The growth in average salaries lagged behind inflation during the latter half of the 1970s, but exceeded inflation during the 1980s.**

- **Over the entire period (1974-75 to 1986-87), the growth in average salaries (149 percent) exceeded the growth in the consumer price index (118 percent).**

Administrative salaries have increased faster than inflation, but slower than salaries of other staff.

Data from the Minnesota Department of Education show that average salaries grew faster for teachers (153 percent) than for other licensed staff. Average salaries were up 128 percent for superintendents, principals, and their assistants; 126 percent for other administrators; and 136 percent for support staff.

Some caution is advised in interpreting these statistics since the average years of experience and average educational achievement of teachers increased during this period. Declining enrollment resulted in layoffs of many lower-paid, less experienced teachers and thus had the statistical effect of increasing the average salary of the remaining teachers. As a result, the average salary of teachers who have taught since the 1974-75 school year probably did not increase as much as indicated by department data.

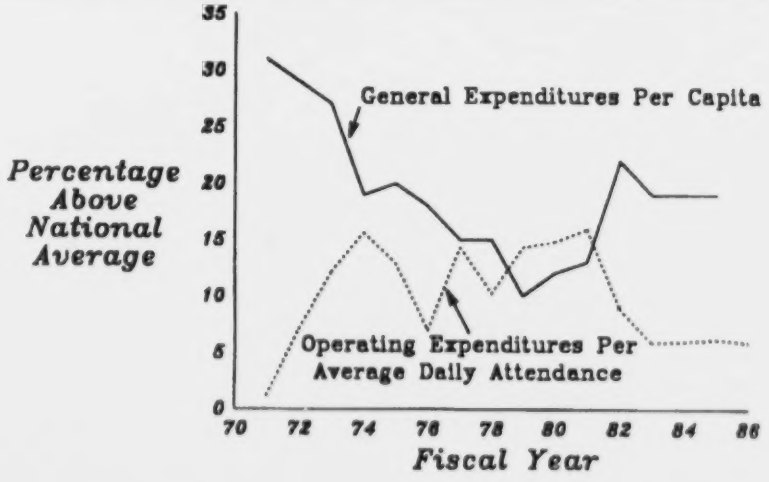
However, available data on teacher salary schedules suggest that the average salary for those who have taught since the 1974-75 school year increased more than inflation and at least as much as the average salaries of other licensed staff. As a result, we conclude that:

- **On average, administrative salaries have not increased faster than the salaries of teachers or licensed support staff.**

NATIONAL COMPARISONS

National data show that Minnesota spends more on elementary and secondary education than the average state. For example, data from the National Education Association show that:

- **Since 1983, Minnesota's current operating expenditures per student have held steady at 6 percent above the national average.**



SOURCE: National Education Association and U.S. Bureau of the Census.

Minnesota Spending Compared to National Averages

Data from the United States Census Bureau show that:

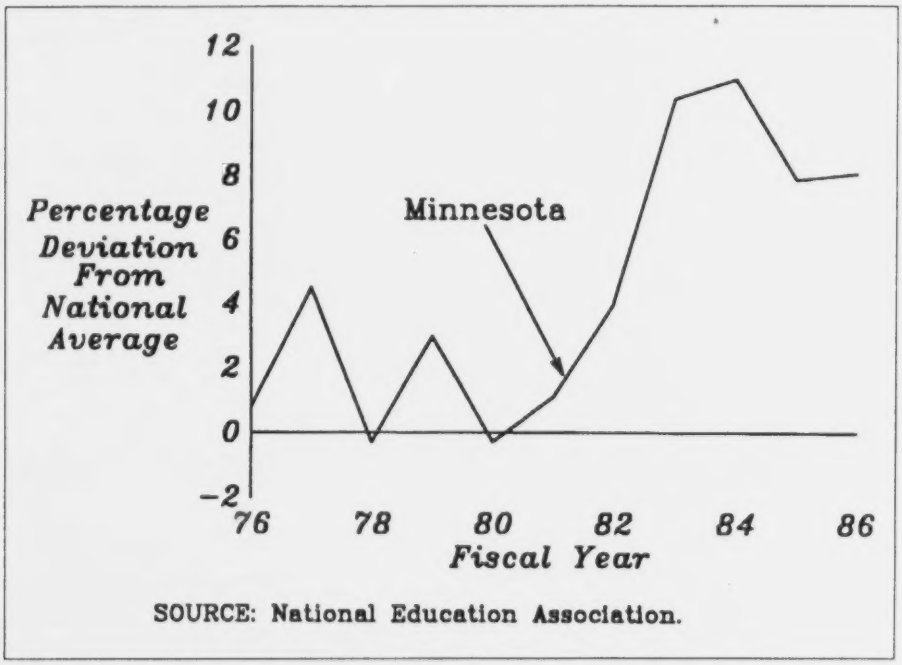
- **Minnesota's education expenditures (including nonoperating expenditures) per state resident exceeded the national average by 19 percent in 1985.**

Sorting out the sources of Minnesota's higher than average spending is not easy because available spending data are not generally broken down into programmatic categories. However, we were able to identify several areas in which Minnesota spends more than the rest of the nation. First, NEA data indicate that:

- **Since 1983, the average teacher salary has been at least 8 percent higher in Minnesota than the national average.**

Data from the Educational Research Service suggest that average salaries for certain support staff (librarians, counselors, and nurses) are also about 8 per-

cent higher than the national average, while salaries for Minnesota administrators are slightly below the national average.



Minnesota Teacher Salaries Compared to the National Average

Second, Census Bureau data show that:

- **Minnesota's per capita expenditures on capital outlay have exceeded the national average by about 21 percent over the last decade.**

Finally, data from several national sources all agree that Minnesota has more teachers than average when compared to its enrollment. Based on data from the United States Department of Education, we estimate that Minnesota has about five percent more teachers per 1,000 students than the national average.

Minnesota has more special education teachers but fewer administrators and support staff than the national average.

However, almost the entire difference between Minnesota and the rest of the nation is accounted for by Minnesota's greater employment of special education teachers. In 1985, the most recent year for which national data on special education teachers are available, we found that:

- **Minnesota had about 25 percent more special education teachers per 1,000 total students than the national average.**

- **When special education teachers are excluded, Minnesota had about the same number of classroom teachers per 1,000 students as the rest of the nation.**

In contrast, the best available data indicate that:

- **Minnesota has fewer than average numbers of administrators, professional support staff, and unlicensed support staff.**

The most comprehensive set of national data is available from the Center for Education Statistics at the United States Department of Education. These data show that Minnesota has about six percent fewer administrators per 1,000 students than the national average. Minnesota administrators, however, are more likely to work at the district level than in the schools. Half of the administrators in Minnesota are classified as district-based staff compared to a national average of one-third. The department's data also show that Minnesota has 28 percent fewer counselors and 12 percent fewer librarians than the national average.

Among unlicensed staff, Minnesota generally has fewer staff than the national average, although the pattern varies among different groups. The department's data indicate that Minnesota has 27 percent fewer "other support services" staff (such as maintenance employees, food service workers, and bus drivers) and seven percent fewer school and library support staff (such as secretaries). However, the data also suggest that Minnesota has 17 percent more administrative support staff (such as secretaries and accounting personnel) and four percent more instructional aides.

VARIATION AMONG DISTRICTS

By District Enrollment

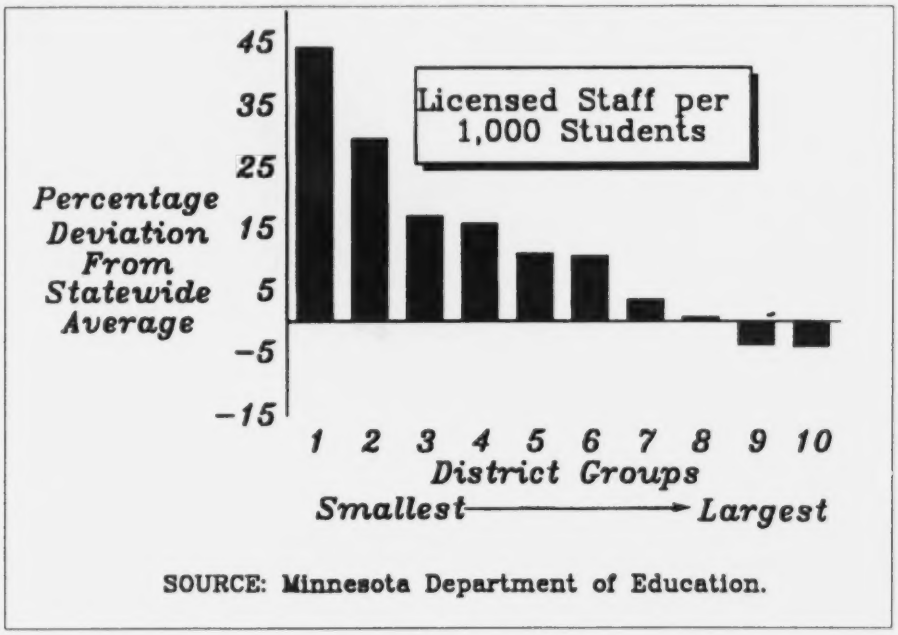
In preparing this report, we also examined the extent to which per pupil operating expenditures, licensed staff per 1,000 students, and average salaries varied among school districts in Minnesota. Ranking Minnesota's school districts by their enrollment and dividing them into 10 approximately equal groups of 43 to 44 districts each, we found that:

- **The districts with larger enrollments employ fewer teachers and administrators per 1,000 students than the state average but tend to have more support staff such as counselors, psychologists, and social workers.**

Overall, the number of licensed staff varies from 94 per 1,000 students for the smallest group of districts to less than 63 for the largest group.

However, the variation in average salaries is just the opposite:

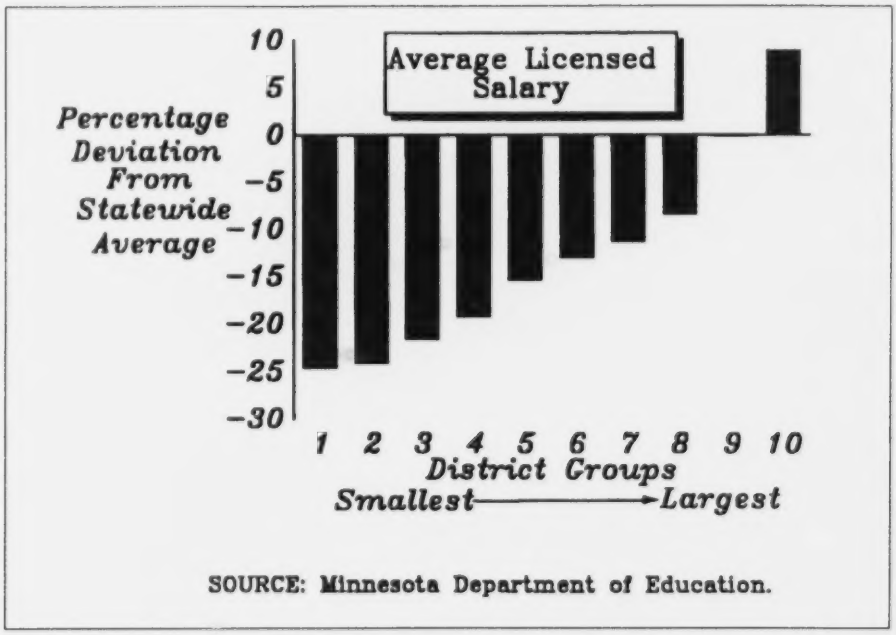
- **Districts with larger enrollments generally pay higher salaries to licensed staff.**



SOURCE: Minnesota Department of Education.

Licensed Staffing Levels by District Enrollment

Larger districts have lower staffing levels but higher salaries.



SOURCE: Minnesota Department of Education.

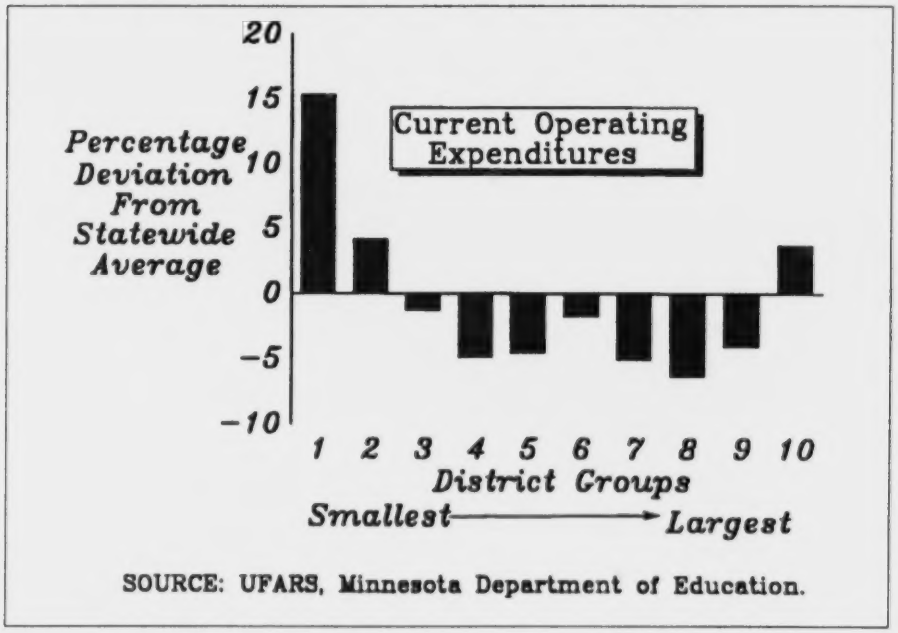
Licensed Salary Levels by District Enrollment

During the 1986-87 school year, average teacher salaries ranged from $21,350 for the smallest group of districts to $30,994 for the largest group of districts. For other licensed staff, average salaries ranged from $28,942 to $39,902.

The combined effect of salaries and staffing, as well as other expenditures, is that:

- **The 20 percent of districts with the smallest enrollments and the 10 percent of districts with the largest enrollments have above average operating expenditures per pupil unit. Other districts have below average costs.**

In 1985-86, the group of districts with the smallest enrollments (Group 1) had per pupil expenditures that were 15.4 percent above the state average. Group 2 districts had costs that were 4.2 percent above average while the largest districts (Group 10) had costs that were 3.7 percent above average.



Variation in Operating Expenditures by District Enrollment

By Regional Location

There are also regional differences in operating expenditures per total pupil unit. In particular, the Twin Cities metropolitan area, northeastern Minnesota, and northwestern Minnesota spend more than the statewide average.

Higher than average salaries is the principal reason for the higher expenditures in the metropolitan area:

- **Average licensed salaries in the Twin Cities metropolitan area are 19 percent higher than in outstate Minnesota.**

Metropolitan area districts have fewer staff but higher salaries than outstate districts.

As a result, operating expenditures per total pupil unit are 6 percent higher in the metropolitan area than in outstate Minnesota, even though metropolitan area districts employ 7 percent fewer licensed staff per 1,000 students.

Some of the regional variation in salary levels and expenditures coincide with differences in the average enrollment of districts in a region. For example, metropolitan area districts have seven times the enrollment of outstate districts on average. Higher salary levels and per pupil expenditures in metropolitan area districts may be due to both a regional effect and an enrollment effect. However, separating the effect of district enrollment from that of regional location would require sophisticated, mathematical techniques.

Other Factors

While these two factors seem to have a significant impact on a district's salary levels and per pupil expenditures:

- **There is significant variation in per pupil expenditures that is not explained by a district's enrollment or location.**

For example, significant variation exists among the large, suburban districts in the Twin Cities metropolitan area. Of the largest 43 districts, twenty-six are in the metropolitan area. Excluding the Minneapolis and St. Paul school districts:

- **Operating expenditures per total pupil unit range from $2,407 to $3,973 in these 24 suburban districts -- a difference of 65 percent.**

Average licensed salaries vary from $27,519 to $37,585--a spread of 37 percent. The number of teachers per 1,000 students ranges from 45 to 57--a difference of 27 percent. Finally, the number of other licensed staff (administrators and support personnel) varies from 5 to 12 full-time equivalents per 1,000 students--a range of 140 percent.

Some of these differences, such as the variation in staffing levels, probably reflect differences in the preferences of district administrators, school boards, and parents for school services. The variation in average salaries, however, is also affected by recent trends in a district's enrollment. Districts with declining enrollments tend to have higher than average salaries since lower-paid, less experienced teachers have been laid off.

DISCUSSION

We found little evidence that noninstructional spending, staffing, or salaries have grown relative to instructional spending, staffing, or salaries. In addition,

national data do not suggest that administrative staffing or salary levels in Minnesota are high relative to the rest of the nation. Other than higher than average capital expenditures, the data do not identify any other significant noninstructional factors that explain Minnesota's higher than average education costs.

Special education has been the fastest growing program.

Available statewide data point to special education, a program that been subject to increasing federal and state mandates, as the fastest growing program. Evidence suggests that the growth in special education may have been matched by a decline in the share of licensed staff and spending in regular instruction. In addition, national data indicate that, relative to enrollment, Minnesota has about 25 percent more special education teachers than the national average.

This decline in the share of resources going to classroom instruction does not represent a real decline. While the share going to classroom instruction decreased, the number of teachers (excluding special education) has actually grown 4 percent relative to enrollment since the mid-1970s. Also, national data show that Minnesota has about the same number of teachers (excluding special education) per 1,000 students as the national average.

SPENDING

Chapter 1

In Minnesota, elementary and secondary education receives a substantial share of state and local taxes. In 1987, about 32 percent of the state's overall budget was allocated to appropriations and property tax credits for public education. In addition, elementary and secondary education received 44 percent of local property tax collections. Total education expenditures in 1986 exceeded $3 billion.

Education receives one-third of the state budget and close to one-half of local property taxes.

This chapter examines school district expenditures for elementary and secondary education. It focuses on the following questions:

- **What kinds of expenditures do school districts make?**
- **How have these expenditures changed over time?**
- **How do school district enrollment and location affect spending patterns?**

To answer these questions, we used the Minnesota Department of Education's Uniform Financial Accounting and Reporting System (UFARS). Since 1980, all Minnesota school districts have been using this system for reporting their revenues and expenditures. These data were supplemented with data from the department's "School District Profiles", which is an annual report of district expenditures.

This chapter is divided into four sections. First, we review overall spending trends in education and compare spending growth to changes in the consumer price index. Second, we examine current operating expenditures by program area. We focus particularly on whether noninstructional spending has grown relative to instructional spending. Third, we review the share of spending for salaries, benefits, purchased services, and supplies and materials. Finally, we examine how district enrollment and location affect the size and pattern of spending.

OVERALL SPENDING TRENDS

The state's education accounting system (UFARS) tracks two broad categories of school district spending: (1) current operating expenditures and (2) capital expenditures.[1] A third significant category consists of the employer's share of retirement contributions and social security taxes for staff covered by a teacher retirement fund. Expenditures in the third category have not been tracked by UFARS since they have been paid directly by the state rather than by school districts.[2]

In 1986, education spending exceeded $3 billion.

During the 1985-86 school year, spending in these three categories was slightly more than $3.0 billion. Current operating expenditures accounted for 81 percent of the total, while capital expenditures and retirement contributions accounted for 12 percent and 7 percent respectively (see Figure 1.1). We reviewed the change in education spending using two methods. First, we examined the change in current operating expenditures per total pupil unit between the 1975-76 and 1985-86 school years.[3] Second, we calculated the change in per pupil spending for all three categories of expenditures between the 1980-81 and 1985-86 school years. In both cases, we used the Minneapolis-St. Paul Consumer Price Index to convert spending figures to constant dollars.[4]

Current Operating Expenditures

We found that, over the ten-year period ending in 1986, current operating expenditures per pupil unit grew by 142 percent compared to a 100 percent increase in the consumer price index (see Figure 1.2). As a result:

- **Operating expenditures per pupil unit grew by about 21 percent in real terms (constant dollars) between the 1975-76 and 1985-86 school years.**

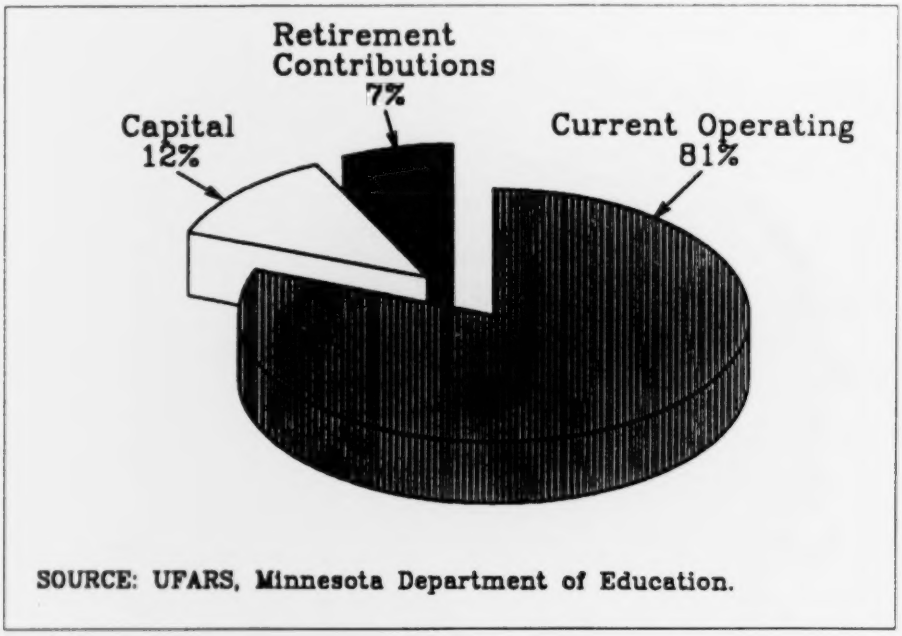
For most of this period, increases in spending did not exceed the inflation rate by much. Through the 1982-83 school year, expenditures per pupil unit grew

1 The second category includes capital outlay, building construction, and debt service expenditures.

2 Beginning with the 1988-89 school year, school districts will be responsible for these costs, which will then be tracked by UFARS as part of current operating expenditures. Retirement contributions and taxes for unlicensed staff such as custodians and secretaries are already paid by school districts and are included in current operating expenditures.

3 In this chapter, expenditures per total pupil unit is our principal measure of costs. Total pupil units are computed by applying weights to a district's average daily membership (ADM). Each kindergarten ADM counts as 0.5 pupil units; each prekindergarten, handicapped kindergarten, and elementary ADM counts as 1.0 pupil unit; and each secondary ADM counts as 1.4 ADM.

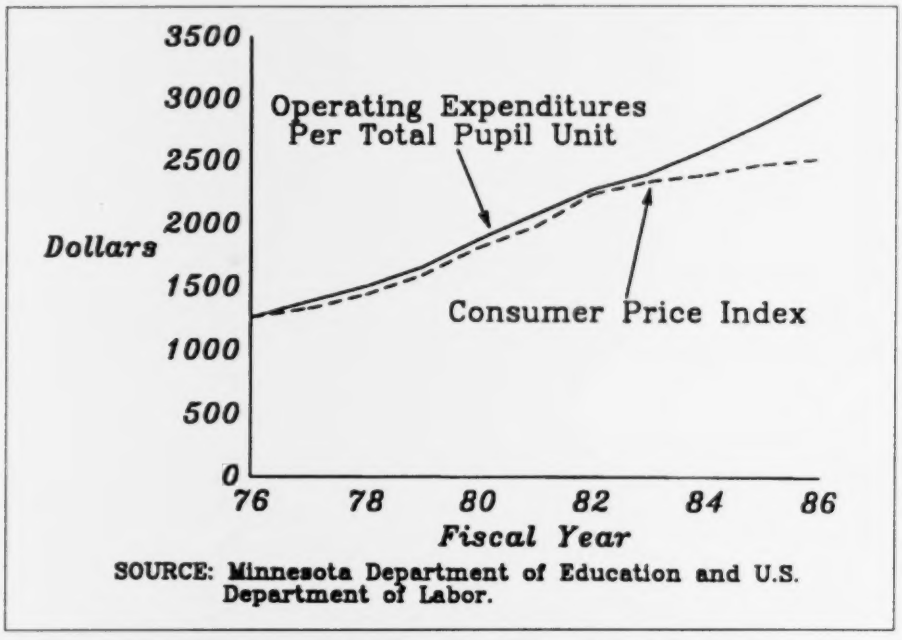
4 The consumer price index figures used in this chapter were calculated from the Minneapolis-St. Paul composite CPI for wage earners. The CPI for each school year is an average of the CPI for each October and the following April. We used the Minneapolis-St. Paul CPI because it is the best available measure of the purchasing power of education expenditures in Minnesota.



SOURCE: UFARS, Minnesota Department of Education.

Figure 1.1: Education Spending 1985-86

Growth in operating expenditures has exceeded the inflation rate in recent years.



SOURCE: Minnesota Department of Education and U.S. Department of Labor.

Figure 1.2: Growth in Operating Expenditures Per Pupil Compared to Inflation

by 91 percent compared to an 86 percent increase in the CPI. In constant dollars, spending was only 3 percent higher during the 1982-83 school year than during the 1975-76 school year.

Most of the growth in spending relative to inflation occurred in the last three years of the ten-year period:

- **Operating expenditures per pupil unit rose more than 17 percent in constant dollars between the 1982-83 and 1985-86 school years.**

This more recent growth was due primarily to much lower inflation rates and not higher rates of growth in spending. Over the last three years of the period, spending per pupil unit grew 26 percent compared to just an 8 percent increase in the CPI.

Total Expenditures

We also reviewed the trend in total education expenditures, including capital expenditures and state-paid retirement contributions. For the five-year period ending with the 1985-86 school year, we found that retirement contributions and taxes per pupil unit grew faster than current operating expenditures -- a 68 percent increase compared to 46 percent (see Table 1.1). Capital expenditures per pupil unit grew at a slower pace (up 23 percent) primarily because building construction declined dramatically (down 28 percent).

Retirement contributions and taxes grew 68 percent in five years.

Category	1980-81	1985-86	Percentage Change	Percentage Change in Constant Dollars
Current Operating	$2,082	$3,040	46.0%	14.5%
Retirement Contributions	159	267	67.9	31.7
Subtotal	$2,241	$3,307	47.6%	15.7%
Capital Outlay	$ 122	$ 188	54.1%	20.8%
Building Construction	93	67	-28.0	-43.5
Debt Service	143	184	28.7	0.9
Subtotal	$ 358	$ 439	22.6%	- 3.8%
TOTAL	$2,599	$3,746	44.1%	13.0%

Sources: Uniform Financial Accounting and Reporting System, Minnesota Department of Education; and the Department of Finance.

Table 1.1: Expenditures Per Total Pupil Unit 1980-81 to 1985-86

During this period, the increase in the CPI was about 28 percent. Consequently, as Figure 1.3 shows:

- **Retirement contributions and taxes per pupil unit grew by 32 percent in constant dollars compared to a 14 percent increase in current operating expenditures and a 4 percent decline in capital expenditures per pupil unit.**

- **Overall, spending per pupil unit grew by 13 percent in constant dollars.**

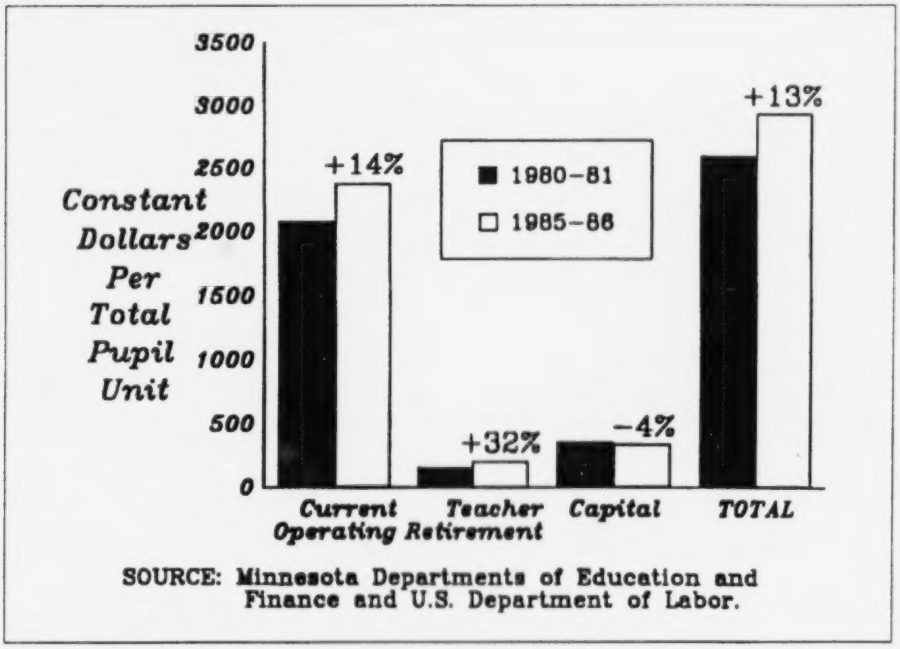


Figure 1.3: Constant Dollar Changes in Education Spending

Among capital expenditures, capital outlay per pupil unit grew the fastest in constant dollars (up 21 percent). However, the real growth in debt service was less than one percent and building construction costs per pupil unit were down 44 percent in constant dollars.

SPENDING BY PROGRAM AREA

In this section, we look at the composition of education expenditures by program area. We focus particular attention on the following question:

- **How has the share of resources going to instructional activities changed relative to that for noninstructional or administrative activities?**

Both in Minnesota and across the nation, concern has been expressed that noninstructional activities have grown more than instructional activities. As a result, classroom instruction may be losing ground to less important activities.

There has been concern about the growth in noninstructional spending.

We encountered a number of difficulties in addressing this issue. First, the state made major changes in the education accounting system in 1980. The program categories for reporting expenditures were significantly altered, thus limiting the extent to which we could compare trends during the 1970s to trends in the 1980s.

Second, there is no consensus on which programs or activities should be considered instructional and which should be classified as noninstructional. Some prefer a narrow definition of instructional expenditures, limited to the costs of classroom instruction, special education, vocational instruction, and perhaps libraries and computers. Others prefer a very broad definition. They even suggest that nearly all expenditures should be considered instructional since every expenditure either involves instruction or supports instruction in some way. For example, even building operation and maintenance would be considered an instructional cost by some. The operation and maintenance of school buildings is vital to the instructional process since instruction could not occur without heat, water, and adequate space.

Despite these obstacles, it is possible to shed some light on the issue. In response to the accounting problem, we examined the 1970s and 1980s separately. We looked at changes in current operating expenditures between the 1972-73 and 1979-80 school years and also between the 1980-81 and 1985-86 school years. In addition, we made some limited comparisons of the 1970s to the 1980s.

In response to concern about the definition of instructional expenditures, we used a middle-of-the-road definition. In addition, we itemized how the share of spending going to each major program area changed. As a result, those with alternative definitions could regroup the program areas and make their own comparisons of instructional and noninstructional spending.

Trends in the 1970s

Table 1.2 shows how the share of spending in each program category changed between the 1972-73 and 1979-80 school years, while Figure 1.4 explains what types of expenditures are included in each category. The two program categories (instructional salaries and other instruction) most clearly identified as instructional declined from 68.7 percent to 62.0 percent of current operating expenditures. This reduction in share of 6.7 percent is offset by gains in the following categories: fixed charges (2.3 percent), student activities (1.8 percent), transportation (1.7 percent), tuition and transfers (0.7 percent), and food service (0.5 percent).

The loss in share for instructional salaries and other instruction makes it appear that instructional expenditures declined significantly during the 1970s. However, examination of those categories that gained suggests that the decline in instruction's share of spending was smaller. For example, the largest gain occurred in fixed charges, which grew from 4.6 to 6.9 percent. This category includes fringe benefits for instructional and other staff as well as some noninstructional costs. The large increase in fixed charges is due in

TABLE 1.2

CURRENT OPERATING EXPENDITURES PER TOTAL PUPIL UNIT
1972-73 and 1979-80

	1972-73	1979-80	Percent Change	Share of Total: 1972-73	Share of Total: 1979-80	Change in Share[a]
INSTRUCTION-RELATED						
Instructional Salaries	$560	$ 992	77%	59.4%	53.0%	-6.4%
Other Instruction	88	168	91	9.3	9.0	-0.4
Student Activities	6	44	633	0.6	2.4	1.7
Tuition	8	28	250	0.8	1.5	0.6
Subtotal	$662	$1,232	86%	70.2%	65.8%	-4.4%
ADMINISTRATION-RELATED						
Administration	$ 33	$ 66	100%	3.5%	3.5%	0.0%
Attendance and Health	9	16	78	1.0	0.9	-0.1
Transportation	48	128	167	5.1	6.8	1.7
Plant Operation	84	171	104	8.9	9.1	0.2
Plant Maintenance	18	30	67	1.9	1.6	-0.3
Food Service	46	101	120	4.9	5.4	0.5
Fixed Charges	43	129	200	4.6	6.9	2.3
Subtotal	$281	$ 641	128%	29.8%	34.2%	4.4%
TOTAL	$943	$1,872	99%	100.0%	100.0%	0.0%

Source: "School District Profiles," Minnesota Department of Education, 1977-78 and 1979-80.

[a]Percentages may not add or subtract exactly due to rounding.

INSTRUCTION-RELATED AREAS

***Instructional Salaries*: Expenditures for salaries of teachers, principals, consultants, coordinators, librarians, guidance and counseling personnel, psychologists, and other instructional personnel.**

***Other Instruction*: Expenditures for salaries of paraprofessionals, aides, secretaries and clerical personnel, and for textbooks, some library costs, audio-visual materials, instructional supplies, and other expenses of instruction.**

***Student Activities*: Expenditures for all student activities over which the school board has financial control. Examples: Cocurricular and extracurricular activities.**

***Tuition*: Total payments to other districts for education of the district's resident pupils. Examples: payments to vocational centers, special education cooperatives, and other schools in Minnesota or in other states.**

ADMINISTRATION-RELATED AREAS

***Administration*: Expenditures for salaries and other expenses of the school board, the superintendent, and other district-wide administrators.**

***Attendance and Health*: Salaries and other expenditures for attendance and health services, including contracted services.**

***Transportation:* Expenditures for transportation of pupils. Examples: salaries, contracted services, insurance, fuel, vehicle maintenance, and other expenses.**

***Plant Operation*: Expenditures for salaries, contracted services, fuel, utilities, and other expenses for operating the school district plant.**

***Plant Maintenance*: Expenditures for salaries, contracted services, and other expenses for maintaining the school district plant and premises.**

***Fixed Charges*: Expenditures for retirement contributions, insurance payments, rental of land and buildings, interest on loans, abatements, unemployment insurance costs, severance pay, and other recurring expenditures not allocated to any other category.**

***Food Service*: Expenditures for food service salaries, food costs, and lunchroom supplies and equipment.**

TOTAL CURRENT EXPENDITURES: The total of the eleven preceding categories of expenditures. It includes all expenditures incurred for the benefit of elementary-secondary education during the school year, except capital and debt service expenditures.

Source: "School District Profiles, 1979-80"; Minnesota Department of Education, July 1981.

Figure 1.4: Program Areas in the 1970s

part to improved fringe benefit packages and rising health care and social security costs. Because a substantial portion of the increased fringe benefits went to instructional staff, it is unclear how much of the increased share for fixed charges came at the expense of instructional expenditures.

The second largest gain was in the student activities category, which grew from 0.6 to 2.4 percent of operating expenditures. Expenditures for student activities increased for two principal reasons. First, school districts assumed financial control over many extracurricular and cocurricular activities previously funded through special accounts or cash transactions. As a result, this accounting change makes it appear that there was a larger increase in this category than actually occurred. Second, there was some real growth in athletic programming for girls as a result of Title IX of the federal Education Amendments of 1972, which prohibited sexual discrimination in education programs. The impact of this second factor on instructional spending is unclear since there is disagreement about whether extracurricular and cocurricular activities should be considered instructional. During the 1980s, the state's accounting system has included these activities in the regular instruction category along with classroom instruction.

The category of tuition and transfers grew from 0.8 to 1.5 percent of expenditures during the 1970s. However, this category should be considered instructional since it consists of tuition payments to other school districts for educating a district's resident pupils. The growth during the 1970s reflects increasing cooperation and sharing among school districts.

The increases in the share of spending going to transportation and food service represent an increase in noninstructional spending. The increase may have occurred because fuel and food prices increased significantly during the 1970s, while average teacher salaries grew slower than inflation.

Overall, we conclude that:

- **The share of operating expenditures going to instructional activities probably declined between 2 and 5 percentage points between the 1972-73 and 1979-80 school years.**

Instruction's share of spending declined during the 1970s but increased during the 1980s.

The amount of decline depends on: (1) what percentage of the increase in fixed charges was for the fringe benefits of instructional staff, and (2) how one treats the increase in expenditures for student activities. Table 1.2 lists student activities as an instructional category, while fixed charges are listed as a noninstructional or administration-related category. This allocation of expenditures shows a decrease of about 4 percentage points in the instructional share of spending.

Trends in the 1980s

Unlike the 1970s, the 1980s have seen a shift of resources toward instructional activities. Table 1.3 shows that current operating expenditures for instructional activities grew 54 percent between the 1980-81 and 1985-86 school years while expenditures for noninstructional or administration-related activities grew 33 percent. (See Figure 1.5 for a description of each instructional and noninstruotional program category.) As a result:

TABLE 1.3

CURRENT OPERATING EXPENDITURES PER TOTAL PUPIL UNIT
1980-81 and 1985-86

	1980-81	1985-86	Percent Change	Share of Total: 1980-81	Share of Total: 1985-86	Change in Share[a]
INSTRUCTION-RELATED						
Regular Instruction	$ 925	$1,357	47%	44.4%	44.6%	0.2%
Vocational Instruction	43	72	67	2.1	2.4	0.3
Exceptional Instruction	186	341	83	8.9	11.2	2.3
Instructional Support	65	111	71	3.1	3.7	0.5
Pupil Support	51	78	53	2.4	2.6	0.1
Subtotal	$1,270	$1,959	54%	61.0%	64.4%	3.4%
ADMINISTRATION-RELATED						
Administration	128	181	41%	6.1%	6.0%	-0.2%
District Support	65	80	23	3.1	2.6	-0.5
Operations and Maintenance	218	296	36	10.5	9.7	-0.7
Food Service	121	144	19	5.8	4.7	-1.1
Transportation	154	208	35	7.4	6.8	-0.6
Other	126	172	37	6.1	5.7	-0.4
Subtotal	$ 812	$1,081	33%	39.0%	35.6%	-3.4%
TOTAL	$2,082	$3,040	46%	100.0%	100.0%	0.0%

Source: Uniform Financial Accounting and Reporting System, Minnesota Department of Education.

[a]Percentages may not add or subtract exactly due to rounding.

INSTRUCTION-RELATED AREAS

***Regular Instruction*: Expenditures for elementary and secondary classroom instruction, excluding vocational and exceptional instruction, and for cocurricular and extracurricular activities. Examples: teacher salaries, aides, coaches, classroom supplies, and textbooks.**

***Vocational Instruction*: Expenditures in secondary schools for instruction related to job skills and career exploration. Examples: home economics, industrial, business, agriculture, and distributive education.**

***Exceptional Instruction*: Expenditures for instruction of students who, because of atypical characteristics or conditions, are provided educational programs different from regular instructional programs. Examples: emotionally handicapped, gifted and talented, mentally retarded; physically impaired; and those with special learning or behavior problems.**

***Instructional Support*: Expenditures for activities which help teachers provide instruction, excluding principals or superintendents. Examples: assistant principals, curriculum development, libraries, audio-visual support, staff development, and computer assisted instruction.**

***Pupil Support*: Expenditures for all other student services, excluding transportation and food. Examples: counseling, guidance, health services, psychological services, and attendance and social work services.**

ADMINISTRATION-RELATED AREAS

***District Administration*: Expenditures for the school board and for the office of the superintendent, principals, and other administrators who supervise staff.**

***District Support*: Expenditures for central office administration which are not directly related to instruction, pupil support or community services. Examples: business services, data processing, legal services, personnel office, printing and the school census.**

***Operations and Maintenance*: Expenditures for operation, maintenance, and repair of the district's buildings, grounds and equipment. Examples: custodians, fuel for buildings, electricity, telephones and repairs.**

***Food Service*: Expenditures for preparing and serving meals and snacks to students.**

***Transportation*: Expenditures for transportation of students. Examples: salaries, contracted services, and fuel for buses.**

***Other Operating Programs:* Expenditures for all other operating activities not charged to any other category.**

TOTAL OPERATING PROGRAM EXPENDITURES: The total of the eleven preceding categories of expenditures. This figure includes all expenditures incurred for the benefit of elementary and secondary education during the school year, except capital and debt service expenditures.

Source: "School District Profiles, 1985-86", Minnesota Department of Education, June 1987.

Figure 1.5: Program Areas in the 1980s

- **The share of operating expenditures going to instructional activities increased 3.4 percentage points during the first half of the 1980s.**

However, not all instructional program areas increased at the same rate. Regular instruction (up 47 percent) increased only slightly faster than the average for all programs (up 46 percent) and gained only 0.2 percentage points in its share of expenditures.

The largest increase was in exceptional instruction which rose 83 percent. Expenditures in this category, which consists primarily of special education programs for handicapped students, increased from 8.9 to 11.2 percent of operating expenditures -- a gain of 2.3 percentage points. Consequently:

- **Exceptional instruction accounts for about two-thirds of the gain in instruction's share of spending during the 1980s.**

Summary

Overall, the available data do not indicate that there has been a major shift in operating expenditures between instructional and noninstructional activities between the early 1970s and the mid-1980s. Instructional activities appear to have lost a little ground during the 1970s but gained most of it back during the 1980s.

Some of these minor movements may reflect how average teacher salaries changed relative to inflation. As Chapter 2 will show, average teacher salaries generally grew slower than inflation rates during the 1970s but faster during the 1980s. Rapidly increasing fuel and food prices caused instructional salaries to lose ground to noninstructional areas such as transportation and food service during the 1970s. During the 1980s, average teacher salaries increased faster than fuel and food prices, causing instructional activities to gain ground on transportation, food service, and other noninstructional areas that are more dependent than instruction on material costs.

Noninstructional spending has not grown faster than instructional spending.

While instructional activities do not appear to have lost much ground, if any, since the early 1970s, it is less clear that "regular instruction" has maintained the same share. During the 1980s, we found that regular instruction increased faster than noninstructional activities but had only a small gain (0.2 percentage points) in its share of expenditures. Special education accounted for most of the gain in instruction's share during the 1980s. Unfortunately, during the 1970s, spending data for regular, special, and vocational instruction were all included in the same category. However, the staffing data we examine later in Chapter 2 strongly indicate that special education also grew faster than other instructional activities during the 1970s. This suggests that regular instruction may have lost more ground than did the average for all instructional activities during the 1970s. In other words:

- **While instructional activities did not lose ground to noninstructional activities since the early 1970s, there probably was a shift among instructional activities with regular instruction declining and special education increasing.**

TYPE OF EXPENDITURES

In this section we examine Minnesota's educational expenditures from a different perspective. Instead of looking at spending by program area, we look at it by object or type of expenditure. The following components of spending are examined: salaries, employee benefits, purchased services, supplies and materials, and other.[5] Unless otherwise stated, employee benefits do not include state contributions for retirement and social security on behalf of professional staff covered by a teacher retirement plan.

Changes Over Time

As we have already seen, current operating expenditures per total pupil unit increased 46 percent from 1980-81 through 1985-86. Figure 1.6 shows how district expenditures for salaries, benefits, purchased services, and supplies have changed since 1980-81. As indicated:

- **Expenditures for fringe benefits grew faster than any other category of spending during the 1980s.**

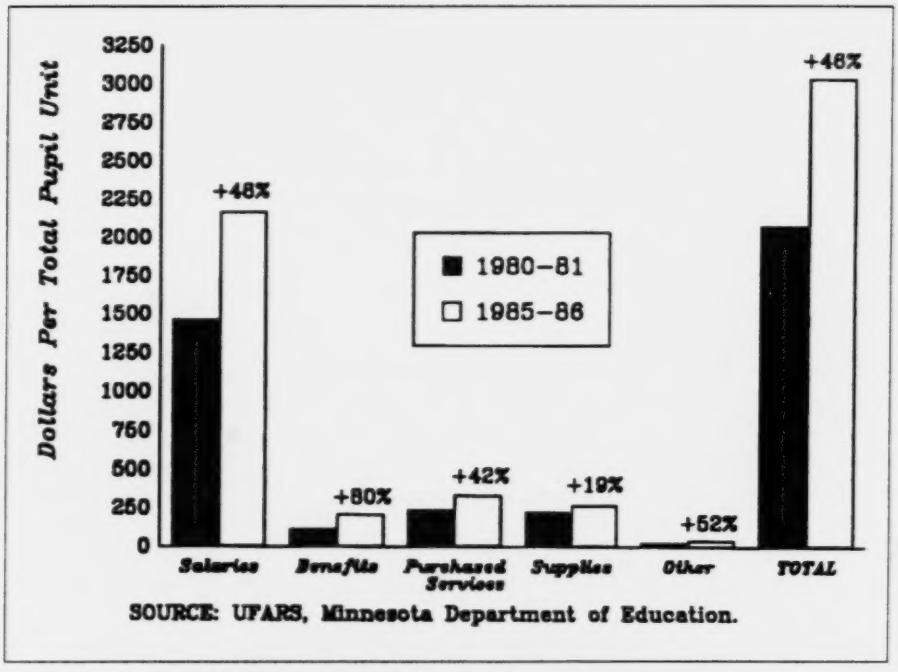


Figure 1.6: Changes in Current Operating Expenditures Per Total Pupil Unit By Object of Expenditure

5 The "other" category includes membership fees and dues, judgments against school districts, and other miscellaneous expenses not classified elsewhere.

Fringe benefits grew 80 percent in five years.

Since 1980-81, expenditures per total pupil unit for fringe benefits increased 80 percent. In comparison, expenditures for salaries and purchased services increased 48 and 42 percent respectively. Other expenditures per pupil unit increased 52 percent, while expenditures for supplies and materials rose only 19 percent. During this same time period, the Minneapolis-St.Paul CPI increased 28 percent.

State retirement contributions and social security taxes for teachers and other licensed staff increased almost as fast as district expenditures for fringe benefits. As we saw earlier in Table 1.1:

- **State contributions for teacher retirement and social security per total pupil unit increased 68 percent since 1980-81.**

Table 1.4 shows how the different types of expenditures within the various program areas have changed since 1980-81. Few significant trends are evident. However, these data suggest that:

- **School districts are using more outside resources and fewer district staff to provide services in two program areas: district support and transportation.**

District support services are defined as central office services not directly related to instruction or pupil support, such as legal services, business services, data processing, census activities, or personnel services. In 1980-81, purchased services made up 15 percent of district support spending; in 1985-86, purchased services were 20 percent.

In addition, many school districts purchase transportation services from private carriers rather than provide them themselves. Purchased services rose from 60 percent of transportation spending in 1980-81 to 63 percent in 1985-86.

In contrast:

- **School districts are purchasing less vocational instruction services from outside resources (such as vocational centers), and providing more from within their own staff.**

In 1980-81, purchased services accounted for 16 percent of expenditures per pupil unit for vocational services. This decreased to 11 percent in 1985-86.

Table 1.4 also shows significant increases in expenditures per total pupil unit for benefits within each program area since 1980-81. While total benefits increased 80 percent, most of the increase within each program area is due to changes in school district accounting systems. Before 1980, districts routinely grouped all employee benefit expenditures together in the "fixed charges" category. In 1980, school districts were asked to report fringe benefit costs in the specific program areas where they were incurred. For example, benefits for counselors and social workers would be allocated to pupil support, while benefits for superintendents would be allocated to district administration. As more districts began reporting benefit costs in this manner, benefit expenditures reported within each program area grew.

	1980-81	Percent of Subtotal	1985-86	Percent of Subtotal	Percent Change
INSTRUCTION-RELATED					
REGULAR INSTRUCTION					
Salaries	$833	90%	$1,211	89%	45%
Benefits	7	1	35	3	400
Purchased	18	2	30	2	67
Supplies and Materials	59	6	72	5	22
Other	8	1	10	1	25
Subtotal	$925		$1,357		47%
VOCATIONAL INSTRUCTION					
Salaries	$ 32	74%	$ 59	82%	84%
Benefits	0	1	1	1	300
Purchased	7	16	8	11	14
Supplies and Materials	3	7	4	6	33
Other	0	0	0	0	0
Subtotal	$ 43		$ 72		65%
EXCEPTIONAL INSTRUCTION					
Salaries	$157	84%	$283	83%	80%
Benefits	4	2	14	4	250
Purchased	20	11	37	11	46
Supplies and Materials	4	2	5	1	25
Other	1	1	1	0	0
Subtotal	$186		$341		83%
INSTRUCTIONAL SUPPORT					
Salaries	$ 46	71%	$ 81	73%	76%
Benefits	1	2	3	3	200
Purchased	6	9	10	9	67
Supplies and Materials	11	17	15	14	36
Other	1	2	2	2	100
Subtotal	$ 65		$111		71%
PUPIL SUPPORT					
Salaries	$ 46	90%	$ 70	90%	52%
Benefits	0	1	2	3	388
Purchased	2	4	3	4	50
Supplies and Materials	1	2	2	3	100
Other	1	2	1	1	0
Subtotal	$ 51		$ 78		53%
ADMINISTRATION-RELATED					
DISTRICT ADMINISTRATION					
Salaries	$109	85%	$155	86%	42%
Benefits	3	2	6	3	100
Purchased	10	8	12	7	20
Supplies and Materials	4	3	4	2	0
Other	3	2	4	2	33
Subtotal	$128		$181		41%
DISTRICT SUPPORT					
Salaries	$ 44	68%	$ 49	61%	11%
Benefits	5	8	5	6	0
Purchased	10	15	16	20	60
Supplies and Materials	4	6	6	7	50
Other	2	3	5	6	150
Subtotal	$ 65		$ 80		23%

(Continued)

Table 1.4: Current Operating Expenditures Per Total Pupil Unit By Program and Object 1980-81 and 1985-86

	1980-81	Percent of Subtotal	1985-86	Percent of Subtotal	Percent Change
Administration-Related (continued)					
OPERATIONS AND MANAGEMENT					
Salaries	$104	48%	$140	47%	35%
Benefits	3	1	11	4	267
Purchased	55	25	72	24	31
Supplies and Materials	55	25	72	24	31
Other	1	0	1	0	0
Subtotal	$218		$296		36%
FOOD					
Salaries	$ 43	36%	$ 54	37%	26%
Benefits	6	5	9	6	50
Purchased	6	5	4	3	-33
Supplies and Materials	64	53	75	52	17
Other	2	2	2	1	0
Subtotal	$121		$144		19%
TRANSPORTATION					
Salaries	$ 35	23%	$ 51	25%	36%
Benefits	4	3	8	4	100
Purchased	92	60	132	63	43
Supplies and Materials	21	14	16	8	-24
Other	1	1	1	0	0
Subtotal	$154		$208		35%
OTHER					
Salaries	$ 17	13%	$ 19	11%	12%
Benefits	86	68	117	68	36
Purchased	14	11	17	10	21
Supplies and Materials	1	1	0	0	-100
Other	9	7	19	10	111
Subtotal	$126		$172		37%
TOTAL					
SALARIES	$1,466	70%	$2,173	71%	48%
BENEFITS	118	6	212	7	80
PURCHASED	240	12	340	11	42
SUPPLIES AND MATERIALS	228	11	271	9	19
OTHER	29	1	44	1	52
OVERALL TOTAL	$2,082		$3,040		46%

Source: Uniform Financial Accounting and Reporting System, Minnesota Department of Education.

Note: Percentages may not total 100 due to rounding. Subtotals may not equal total due to rounding.

Table 1.4: Current Operating Expenditure Per Total Pupil Unit By Program and Object 1980-81 and 1985-86 (continued)

Expenditures for 1985-86

As previously indicated, school districts spent an average of $3,040 per total pupil unit during 1985-86. Most of this amount is spent for staffing costs. In fact:

- **Staff salaries and benefits account for 78 percent of operating expenditures for elementary and secondary education.**

In 1985-86, school districts spent an average of $2,173 per total pupil unit for the salaries of both licensed and unlicensed staff, or 71 percent of total operating expenditures. Expenditures for staff benefits, such as insurance and health coverage, were another $212 per total pupil unit, or 7 percent of total expenditures.

Spending primarily consists of staff salaries and benefits.

As previously noted, expenditures for employee benefits do not include state payments to retirement funds for teachers and other licensed personnel. State contributions for teacher retirement and social security came to approximately $216 million in 1985-86, or about $267 per total pupil unit.

- **If state contributions for teacher retirement and social security costs were included in districts' current expenditures, total personnel costs (salaries and total benefits) would account for 80 percent of expenditures.**

Finally, districts spent an average of $340 per total pupil unit for purchased services (11 percent of total expenditures), $271 per total pupil unit for supplies and materials (9 percent of total), and $44 per total pupil unit for "other" items (1 percent of total).

VARIATION AMONG DISTRICTS

This section examines how school district enrollment and location affect per pupil spending. It also shows how much variation in spending exists among districts of comparable size and location.

Regional Variation

Table 1.5 shows how spending varies by region of the state (see Figure 1.7). These data indicate that three regions have higher operating expenditures per total pupil unit than the statewide average. They include Region 1&2 (northwestern Minnesota), Region 3 (northeastern Minnesota), and Region 11 (Twin Cities metropolitan area).

Spending in the Twin Cities metropolitan area is 3.3 percent higher than the statewide average, or 6.3 percent higher than outstate Minnesota. For the most part, this difference is due to metropolitan area salaries being generally higher than outstate salaries. (Salaries and staffing are discussed in greater detail in Chapter 2.)

The higher than average expenditures in northeastern and northwestern Minnesota are less easily explained. As we will see in Chapter 2, Region 3 has slightly higher than average salaries and numbers of licensed staff. In addition, Region 3 also has very high operations and maintenance costs. During the 1985-86 school year, operations and maintenance expenditures per total pupil unit were 31 percent higher than the statewide average.

	Current Operating Expenditures Per Total Pupil Unit	Percentage Deviation From Statewide Average
Region		
1&2	$3,138	+3.2%
3	3,203	+5.4
4	2,897	-4.7
5	2,907	-4.4
6&8	2,899	-4.6
7	2,812	-7.5
9	2,919	-4.0
Outstate Subtotal	2,954	-2.8
11	3,139	+3.3
STATEWIDE	$3,040	

Source: "School District Profiles, 1985-86", Minnesota Department of Education, June 1987.

Table 1.5: Current Operating Expenditures By Region 1985-86

Spending is higher than average in northern Minnesota and the Twin Cities metro area.

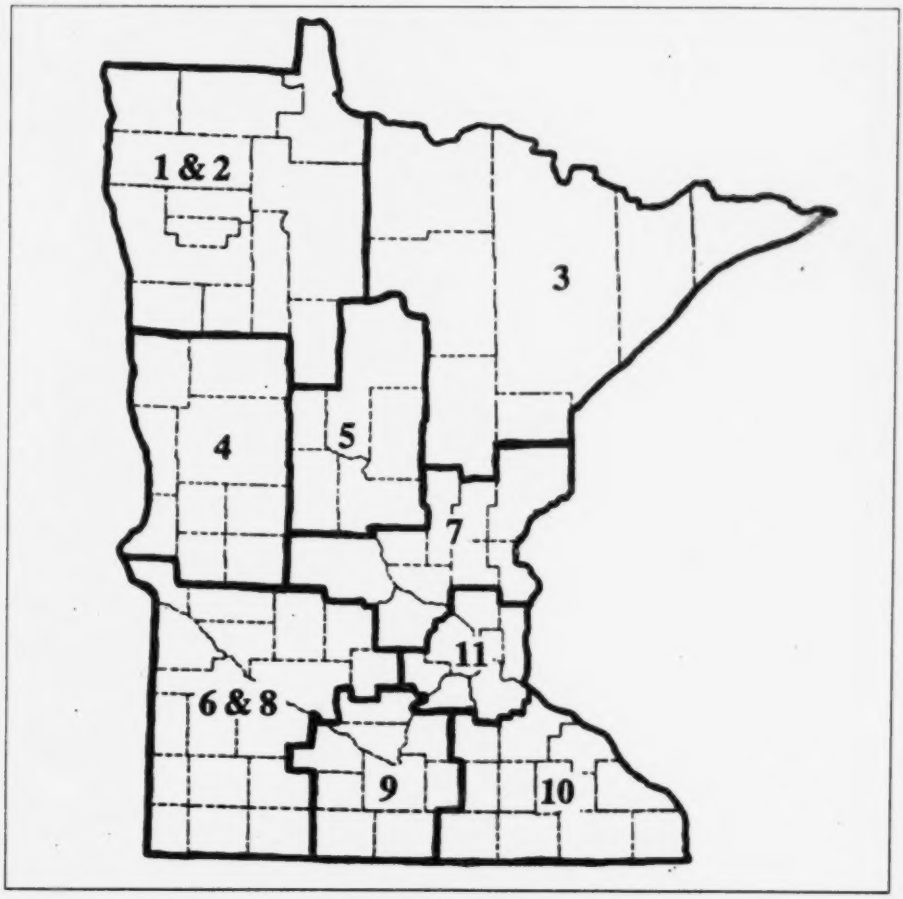


Figure 1.7: Minnesota Education Regions

Northwestern Minnesota (Region 1&2) is a large, sparsely populated area. It has many school districts with relatively small enrollments. School districts in northwestern Minnesota have more licensed staff per 1,000 students than average, although they pay lower salaries. In addition, they spend more per pupil unit for operations and maintenance, food services, and transportation than the statewide average.

Variation by Size

To examine spending patterns by district size, we divided the state's school districts into ten groups based on the number of pupil units served. We first ranked school districts by pupil units served and then divided them into 10 groups of approximately equal size. Each group contains about 10 percent of the state's school districts. Group 1 contains the state's smallest 44 districts; these districts serve about one percent of the state's total pupil units. Group 10 contains the state's largest 43 districts, and they have about 52 percent of the state's pupil units.

Changes Over Time

We have already seen that, from 1980-81 through 1985-86, statewide operating expenditures per total pupil unit increased 46 percent. Table 1.6 shows that:

- **Expenditure growth did not differ much among districts of varying sizes.**

District Size Groupings	1980-81	1985-86	Percent Change
1	$2,370	$3,508	48%
2	2,116	3,168	50
3	2,080	3,001	44
4	1,978	2,891	46
5	1,988	2,900	46
6	2,086	2,984	43
7	1,937	2,885	49
8	1,975	2,845	44
9	1,992	2,915	46
10	2,152	3,142	46
Total	$2,082	$3,040	46%
Minneapolis-St. Paul Consumer Price Index (1967-w)	262.0	334.15	28%

Source: Uniform Financial Accounting and Reporting System, Minnesota Department of Education.

Table 1.6: Current Operating Expenditures Per Total Pupil Unit For Districts of Varying Size 1980-81 and 1985-86

Expenditures grew more rapidly for the smallest 20 percent of districts, increasing an average of 49 percent. Growth was only slightly smaller for the largest 10 percent of districts, averaging 46 percent.

Expenditures for 1985-86

Table 1.7 examines how per pupil spending varies by district enrollment. These data indicate that:

Spending is higher than average in the state's smallest and largest districts.

- **Operating expenditures per total pupil unit are higher than the statewide average in the smallest 20 percent of the state's districts, and in the largest 10 percent.**

As Figure 1.8 illustrates, spending is significantly higher than average in the state's smallest districts. These districts spent an average of $3,508 per total pupil unit in 1985-86, 15 percent more than the statewide average of $3,040.

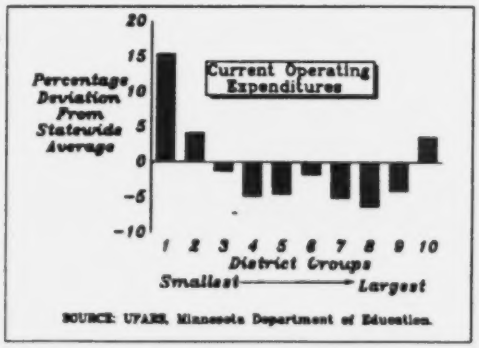


Figure 1.8: Variation in Operating Expenditures by District Enrollment

Instruction-Related Spending

Examining expenditures for instruction-related activities shows that:

- **Spending per total pupil unit in instruction-related program areas was highest in the smallest and largest school districts.**

The smallest districts spent 9 percent more than the statewide average, while the largest districts spent 3 percent more. However, instruction-related spending in the largest districts is distributed differently across program areas than in the smallest districts. While the largest districts spent less than average on regular and vocational instruction, they spent more than average on exceptional instruction, instructional support, and pupil support.

As Figure 1.9 shows:

- **The state's largest school districts generally spent the most on exceptional education.**

Only the largest 10 percent of the state's districts spent more than the statewide average of $341 per total pupil unit for exceptional education during 1985-86. The smallest half of the districts spent between 17 and 24 percent less than the statewide average.

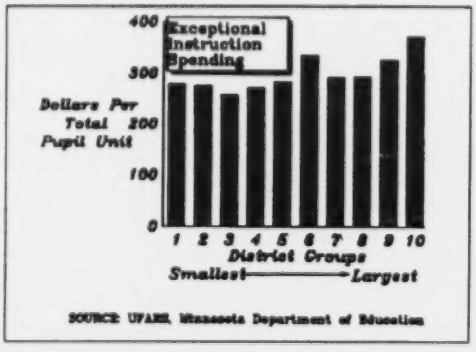


Figure 1.9: Exceptional Instruction Spending By District Enrollment

TABLE 1.7

CURRENT OPERATING EXPENDITURES PER TOTAL PUPIL UNIT BY PROGRAM FOR DISTRICTS OF VARYING SIZE
1985-86

	Current Operating Expenditures Per Total Pupil Unit in District Size Groupings										
	1	2	3	4	5	6	7	8	9	10	Statewide
INSTRUCTIONAL-RELATED											
Regular Instruction	$1,693	$1,509	$1,416	$1,378	$1,384	$1,386	$1,345	$1,348	$1,319	$1,354	$1,357
Vocational Instruction	84	88	89	95	92	88	80	72	71	65	72
Exceptional Instruction	280	277	258	272	284	336	293	294	328	373	341
Instructional Support	58	62	71	62	66	75	81	88	100	134	111
Pupil Support	26	21	32	25	37	57	57	60	78	95	78
Subtotal[a]	$2,141	$1,957	$1,866	$1,832	$1,863	$1,942	$1,856	$1,862	$1,896	$2,021	$1,959
Percent Deviation from Statewide Average	+9.3%	-0.1%	-4.7%	-6.5%	-4.9%	-0.9%	-5.3%	-5.0%	-3.2%	+3.2%	
ADMINISTRATIVE-RELATED											
Administration	$ 309	$ 300	$ 254	$ 238	$ 216	$ 221	$ 202	$ 177	$ 172	$ 164	$ 181
District Support	103	84	69	59	61	58	60	65	71	92	80
Operations and Maintenance	392	327	319	288	275	291	292	292	293	296	296
Food Service	203	184	168	158	155	159	147	140	138	141	144
Transportation	238	228	238	221	227	221	222	216	213	198	208
Other	123	88	87	96	104	90	105	94	133	228	172
Subtotal[a]	$1,368	$1,211	$1,135	$1,060	$1,038	$1,040	$1,030	$ 984	$1,020	$1,119	$1,081
Percent Deviation from Statewide Average	+26.5%	+12.0%	+5.0%	-1.9%	-4.0%	-3.8%	-4.7%	-9.0%	-5.6%	+3.5%	
TOTAL	$3,508	$3,168	$3,001	$2,891	$2,900	$2,984	$2,885	$2,845	$2,915	$3,142	$3,040
Percent Deviation from Statewide Average	+15.4%	+4.2%	-1.3%	-4.9	-4.6%	-1.8%	-5.1%	-6.4%	-4.1%	+3.4%	

Source: Minnesota Department of Education, UFARS.

[a]Subtotals may not equal totals due to rounding.

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As Figure 1.10 shows:

- **Larger districts generally spend more per total pupil unit for instructional support and pupil support activities than do smaller districts.**

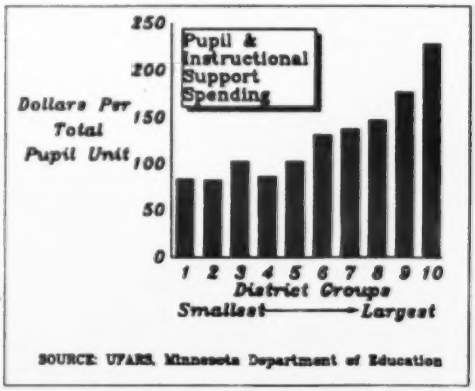


Figure 1.10: Pupil and Instructional Support Spending By District Enrollment

In 1985-86, the statewide average expenditure for instructional support was $111 per total pupil unit. The smallest 10 percent of districts spent the least per total pupil unit for instructional support ($58, or 48 percent less than the statewide average), while the largest districts spent the most ($134, or 21 percent more than the statewide average).

The statewide average expenditure for pupil support during 1985-86 was $78 per total pupil unit. The smallest districts spent $26 per total pupil unit on pupil support (or 67 percent less than the statewide average), while the largest spent $95 (or 22 percent more than the statewide average).

Administration-Related Spending

This section discusses district expenditures for administration-related activities. As Table 1.7 indicates, these expenditures are higher than average in the smallest 30 percent and the largest 10 percent of school districts. Expenditures in the smaller districts were 5 to 27 percent higher than the statewide average, while expenditures in the largest districts were 4 percent higher.

Figures 1.11 and 1.12 show how spending in several of the administration-related program areas varies by district enrollment. In general:

- **Larger school districts spend less per total pupil unit for food service and district administration and support than do smaller districts.**

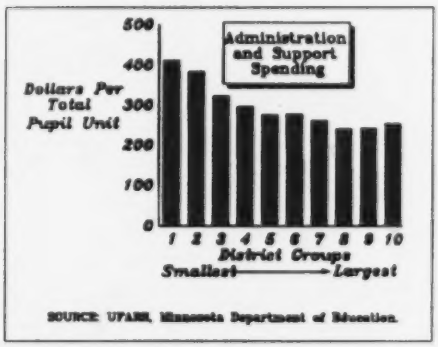


Figure 1.11: Administration and Support Spending by District Enrollment

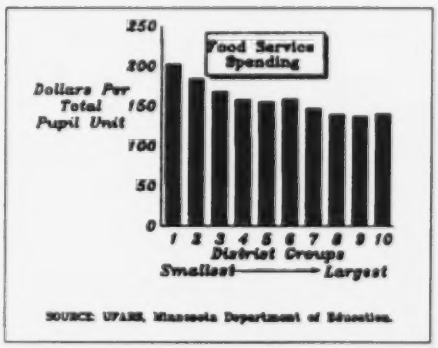


Figure 1.12: Food Service Spending by District Enrollment

In 1985-86, the smallest districts paid an average of $412 per total pupil unit for district administration and support services (or 37 percent more than the statewide average of $261) compared to $256 for the largest districts (or 2 percent less than the statewide average).

In 1985-86, the smallest districts in the state paid an average of $203 per total pupil unit for food services, 41 percent more than the statewide average of $144. The state's largest districts paid an average of $141 per total pupil unit, 2 percent less than the statewide average.

In addition, Figure 1.13 shows that:

- **Small school districts spend more per total pupil unit on operations and maintenance than large districts.**

Operations and maintenance expenditures for the smallest 30 percent of districts ranged from $319 to $392 per total pupil unit. Expenditures in the smallest districts were 32 percent more than the statewide average of $296. The remaining districts had expenditures approximately equal to the statewide average.

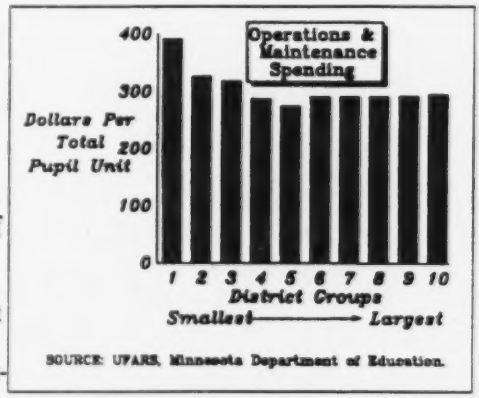


Figure 1.13: Operations and Maintenance Spending By District Enrollment

Transportation expenditures showed less variation, although smaller districts tended to spend more. The smallest group of districts spent 14 percent more than average, while the largest group of districts spent 5 percent less than average.

Object of Expenditures

Table 1.8 shows the effect of district size on salaries, fringe benefits, purchased services, supplies and materials, and other spending. These data indicate that:

- **Both the smallest and the largest school districts spend more per pupil unit on salaries and benefits.**

In 1985-86, the smallest districts spent $2,432 per total pupil unit on salaries and benefits, or 2 percent more than the statewide average of $2,385. The largest districts spent $2,544, or 7 percent more than the statewide average.

In large districts, staff are generally paid more than in small districts. In small districts, however, student-staff ratios are usually lower than they are in large districts, a factor which tends to raise costs.

Expenditures for both purchased services and supplies also are affected by district enrollment. Table 1.8 shows that:

TABLE 1.8

CURRENT OPERATING EXPENDITURES PER TOTAL PUPIL UNIT
BY OBJECT FOR DISTRICTS OF VARYING SIZE
1985-86

	District Size Groupings										
	1	2	3	4	5	6	7	8	9	10	Statewide
Salaries	$2,239	$2,133	$2,026	$1,958	$1,987	$2,076	$1,966	$1,985	$2,039	$2,309	$2,173
Benefits	193	176	171	171	183	194	185	193	187	235	212
Services	561	406	403	366	363	354	391	349	388	304	340
Supplies	444	393	356	335	325	317	299	284	260	247	271
Other	71	61	44	61	43	44	43	33	40	46	44
TOTAL[a]	$3,508	$3,168	$3,001	$2,891	$2,900	$2,984	$2,885	$2,845	$2,915	$3,142	$3,040
Percent Deviation from Statewide Average	+15.4	+4.2%	-1.3%	-4.9%	-4.6%	-1.8%	-5.1%	-6.4%	-4.1%	+3.4%	

Source: Uniform Financial Accounting and Reporting System, Minnesota Department of Education.

[a]Totals may not equal the sum of individual components due to rounding.

- **Small districts spend more per total pupil unit on both purchased services and supplies than large districts.**

In 1985-86, spending on purchased services varied from $561 per total pupil unit (or 65 percent above average) for the smallest group of districts to $304 (or 11 percent below average) for the largest group of districts. Spending on supplies and materials varied from $444 per total pupil unit (or 64 percent above average) for the smallest group of districts to $247 (or nine percent below average) for the largest group of districts.

Other Variation

Spending per pupil varies considerably even among districts of similar size and location.

It should be noted that spending can vary considerably even among districts of comparable size and location. In the largest group of districts, operating expenditures per total pupil unit ranged from $2,407 (or 23 percent less than average for districts of similar size) to $3,973 (27 percent more than average for districts of similar size) during the 1985-86 school year. The range in operating expenditures is the same even if we include only the 24 Twin Cities suburban districts that are in this group of large districts.

Instruction-related expenditures for the state's largest districts averaged $2,021 per total pupil unit for 1985-86, but expenditures for individual districts ranged from about 21 percent below to 18 percent above that average. Noninstructional expenditures averaged $1,119 per total pupil unit; individual district expenditures ranged from 29 percent below to 42 percent above that average.

The variation in total operating expenditures results because districts of comparable size and location have considerably different staffing and salary levels and also vary in other respects. In Chapter 2, we examine the variation in staffing and salary levels.

Some caution is appropriate, however, in interpreting expenditure variation by program area. Districts may vary in how they report certain expenditures. For example, some districts report fringe benefits in the "other" category rather than allocate them to individual program categories. As a result, these districts may appear to have higher noninstructional expenditures than other districts even if their expenditures are similar.

SUMMARY

In summary, our analysis of school district expenditure patterns indicates that:

- **Operating expenditures per pupil unit grew 21 percent in constant dollars between the 1975-76 and 1985-86 school years, with most of the real growth coming in the last three years when inflation rates declined substantially.**

- **The share of operating expenditures going to instructional activities does not appear to have changed much since the early 1970s. However, available data suggest that, among instructional activities, special education gained while regular education lost ground.**

- **Education is a labor-intensive activity with about 80 percent of operating expenditures (including state retirement contributions) paying for staff salaries and benefits. Spending for benefits has grown faster during the 1980s than other types of expenditures.**

- **District enrollment and location have a significant effect upon spending. However, considerable variation in expenditures exists even among districts of comparable size and location.**

STAFFING AND SALARIES

Chapter 2

As we saw in Chapter 1, staff salaries and benefits account for approximately 80 percent of current operating expenditures for elementary and secondary education. Consequently, no analysis of education expenditures would be complete without an examination of how staffing and salary levels have changed in recent years.

This chapter examines staffing and salary trends from the mid-1970s through the 1986-87 school year. It focuses on the following questions:

- **How has licensed staffing changed relative to enrollment?**
- **How have average salaries changed relative to the cost of living?**
- **How do school district enrollment and location affect staffing and salary levels?**

Unfortunately, data are only available on the number of full-time equivalent licensed staff of various types and their base salaries. Comparable data are not available for unlicensed staff such as food service workers, bus drivers, custodians, and clerical staff. However, we estimate that the salaries and benefits of licensed staff account for at least 60 percent of all current operating expenditures. In addition, the licensed staff data include those professional staff involved in direct instruction (teachers) and in providing instruction-related services and support (such as librarians, counselors, social workers, and psychologists), as well as administrators. Consequently, examining data on licensed staff can be very useful in understanding the real changes in educational resources available to Minnesota schools over time.

STAFFING TRENDS

The period we examined was primarily one of declining enrollment. Between the 1975-76 and 1984-85 school years, fall enrollment declined by 20 percent. During the next two years, enrollment rose slightly. Over the entire period, fall enrollment declined 19 percent.

As Table 2.1 indicates, the number of licensed staff followed a similar pattern. The number of staff declined through the 1983-84 school year and has increased since then. However:

- **From 1975-76 to 1986-87, the number of licensed staff decreased by only 8 percent while enrollment fell 19 percent.**

As a result, the ratio of students to licensed staff fell from 17.1 to 15.0 (see Table 2.2). All of this increase in staffing relative to enrollment occurred during the latter half of the 1970s. The student-staff ratio has not fluctuated as much during the 1980s.

Most types of licensed staff declined during the period examined. However, there were three categories that grew during this period of declining enrollment.[1] These categories include:

- special education teachers, which grew by 82 percent;
- special education administrators, which grew by 60 percent; and
- other support staff (including psychologists, social workers, and nurses among others), up by 24 percent.

Since the mid-1970s, staffing levels have grown 14 percent relative to enrollment.

To compare changes in staffing to changes in enrollment, we computed the number of staff of each type per 1,000 students enrolled. We found that:

- **Between the 1975-76 and 1986-87 school years, the number of licensed staff per 1,000 students increased by 14 percent.**

All major staff categories grew relative to enrollment. The number of teachers per 1,000 students grew by 14 percent; support staff by 16 percent; superintendents, principals, and their assistants by 6 percent; and other administrators by 17 percent.

However, examining the growth in staff by major category obscures the reasons for the overall increase. Closer examination of staffing trends reveals that most of the growth relative to enrollment occurred in the three categories we mentioned earlier. In particular:

---

1 A fourth category, middle school teachers, increased by 49 percent. However, that rise was more than offset by a decline in the numbers of elementary and secondary teachers.

TABLE 2.1

LICENSED ELEMENTARY-SECONDARY STAFF (in Full-Time Equivalents)
1975-76 Through 1986-87

Assignment	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	Percent Change Since 1975-76
SUPERINTENDENTS, PRINCIPALS, AND ASSISTANTS													
Superintendents	414	422	416	414	404	398	386	396	398	396	386	373	- 9.9%
Assistant Superintendents	70	71	67	69	70	63	60	55	55	53	57	56	-20.0
Principals	1,476	1,447	1,429	1,401	1,405	1,416	1,386	1,302	1,247	1,246	1,226	1,248	-15.4
Assistant Principals	353	357	345	328	337	325	319	292	300	313	316	305	-13.6
TOTAL	2,313	2,297	2,257	2,212	2,216	2,202	2,151	2,045	2,000	2,008	1,985	1,982	-14.3%
OTHER ADMINISTRATORS													
Special Education Administrators	120	140	149	162	168	178	190	171	177	180	184	192	+60.0%
Secondary Vocational Admin.	76	78	68	65	50	88	122	67	66	62	58	57	-25.0
Other Administrators	1,025	955	925	985	1,000	989	957	776	774	785	895	912	-11.0
TOTAL	1,221	1,173	1,142	1,212	1,218	1,255	1,269	1,014	1,017	1,027	1,137	1,161	- 4.9%
SUPPORT STAFF													
Counselors	1,062	1,019	1,018	1,020	1,022	1,021	996	869	857	855	852	861	-18.9%
Librarians/Media Generalists	1,162	1,155	1,113	1,111	1,094	1,073	1,034	920	900	911	932	949	-18.3
Other Support Staff	956	985	925	986	1,063	1,046	1,024	941	901	1,054	1,034	1,181	+23.5
TOTAL	3,180	3,159	3,056	3,117	3,179	3,140	3,054	2,730	2,658	2,820	2,818	2,991	- 5.9%
TEACHERS													
Prekindergarten	31	26	48	80	50	54	35	31	27	21	50	27	-12.9%
Kindergarten	1,334	1,268	1,169	1,140	1,128	1,148	1,133	1,134	1,186	1,248	1,324	1,369	- 2.6
Elementary	16,995	16,555	16,347	16,077	16,039	15,880	15,356	14,168	13,978	14,298	14,862	15,277	-10.1
Middle School	1,047	1,027	1,047	1,278	1,474	1,413	1,701	1,618	1,492	1,498	1,438	1,559	+48.9
Secondary	21,739	21,605	20,920	20,299	19,385	19,181	18,321	17,019	16,862	16,814	16,844	16,527	-24.0
Special Education	3,668	4,236	4,647	5,160	5,584	6,055	6,100	5,765	5,783	6,131	6,431	6,686	+82.3
TOTAL	44,814	44,717	44,178	44,034	43,660	43,731	42,646	39,735	39,328	40,010	40,948	41,445	- 7.5%
TOTAL--ALL LICENSED STAFF	51,528	51,346	50,633	50,575	50,273	50,328	49,120	45,524	45,003	45,865	46,888	47,579	- 7.7%
FALL ENROLLMENT	879,128	862,076	834,566	805,076	775,629	754,915	733,738	715,221	705,238	701,697	704,436	711,900	-19.0%

Source: Minnesota Department of Education.

TABLE 2.2

STUDENT-STAFF RATIOS

	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87
Students per Licensed Staff	17.1	16.8	16.5	15.9	15.4	15.0	14.9	15.7	15.7	15.3	15.0	15.0
Students per Teacher	19.6	19.3	18.9	18.3	17.8	17.3	17.2	18.0	17.9	17.5	17.2	17.2
Students per Teacher (Excluding Special Education Teachers)	21.4	21.3	21.1	20.7	20.4	20.0	20.1	21.1	21.0	20.7	20.4	20.5

Source: Minnesota Department of Education.

- **The number of special education teachers per 1,000 students more than doubled (up by 125 percent).**
- **Special education administrators per 1,000 students nearly doubled (up by 98 percent).**
- **Other support staff grew by 53 percent relative to enrollment.**

As Figure 2.1 illustrates, these groups have grown considerably relative to enrollment since the mid-1970s.[2]

Special education staffing levels have grown the most.

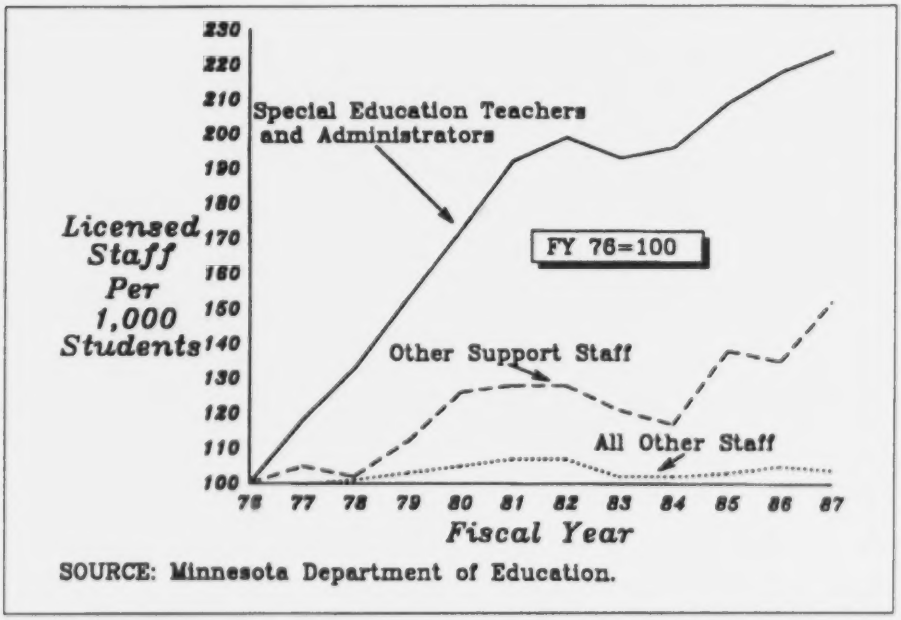


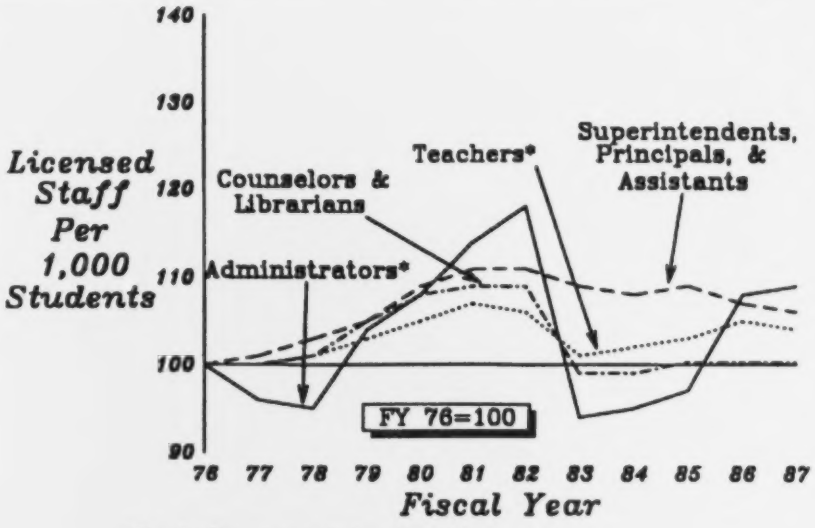
Figure 2.1: Growth in Special Education Teachers and Administrators and "Other" Support Staff Relative to Enrollment

In comparison, the number of all other licensed staff per 1,000 students grew by just 4 percent. As Figure 2.2 shows, these groups and their changes relative to enrollment are:

- **superintendents, principals, and their assistants up by 6 percent;**
- **other administrators (excluding special education) up by 9 percent;**

2 For consistency, the data used in this chapter are all from the licensed staff and salary reports prepared by the Minnesota Department of Education. The department has several other sources of data on special education staff, which indicate a somewhat lower, yet still substantial, rate of growth in the number of special education teachers. If we used the figures that the department reports to the federal government instead of those in the licensed staff and salary reports, the trends would not be substantially different. We estimate that the number of special education teachers per 1,000 students would have nearly doubled, while the number of other teachers per 1,000 students would have increased by about six percent.

Administrative staffing levels have increased less than the average for all staff.



*Excluding special education.

SOURCE: Minnesota Department of Education.

Figure 2.2: Growth in All Other Licensed Staff Relative to Enrollment

- **teachers (excluding special education) up by 4 percent; and**
- **counselors and librarians/media generalists unchanged.**

The primary impact of these staffing trends has been a significant increase in the percentage of licensed staff working in special education. Since the 1975-76 school year, the percentage of licensed staff who are special education teachers or administrators has nearly doubled from 7.4 to 14.5 percent. As Figure 2.3 shows, this increase is almost completely offset by a decrease in the percentage of staff who are teachers but not in special education. That group, which is by far the largest staff group, fell from close to 80 percent to 73 percent of all licensed staff.

It should be pointed out that:

- **The increase in special education staff came at a time when school districts were becoming subject to increasing federal and state mandates to fully and adequately serve handicapped students.**

In Minnesota, the growth in special education staff has in part been due to an increase in the number of students identified as handicapped and also due to a reduction in the number of special education students per special education teacher.[3]

3 For an analysis of special education programs in Minnesota, see our 1984 report: *Evaluation of Special Education,* Office of the Legislative Auditor, Program Evaluation Division, March 1984.

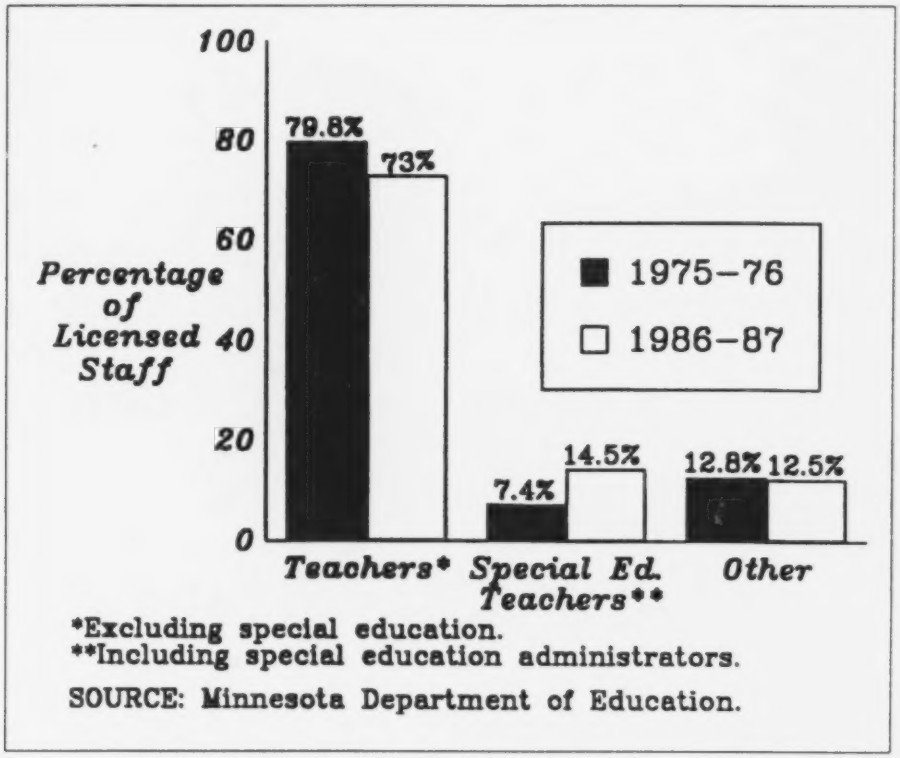


Figure 2.3: Changes in the Composition of Licensed Staff

SALARY TRENDS

As shown in Table 2.3, the statewide average salary for licensed staff was $29,529 in 1986-87. The average for teachers was $28,339 while other licensed staff averaged $37,570. Teachers, who represented 87 percent of licensed staff, received 84 percent of salaries.[4]

Available data indicate that:

- **The growth in average salaries lagged behind inflation during the latter half of the 1970s, but exceeded inflation during the 1980s.**

As shown in Table 2.4, average salaries increased 40.5 percent between the 1974-75 and 1979-80 school years, while the composite consumer price index (CPI) for the Minneapolis-St. Paul area rose by 54.1 percent. However, be-

4 These salary figures include base salaries but do not include additional salaries paid to teachers or others who supervise extracurricular or cocurricular activities.

TABLE 2.3

PERCENTAGE OF STAFF AND FULL-TIME SALARIES, BY ASSIGNMENT
1986-87

Assignment	FTE	Average Salary (Base Salary)	Salary Cost	Percent of Licensed Staff	Percent of Licensed Full-Time Salaries
Superintendents and Assistants	429.2	$49,479	$ 21,236,472	.90%	1.51%
Principals and Assistants	1,552.4	44,315	68,795,292	3.26	4.90
Subtotal	1,981.6	$45,434	$ 90,031,764	4.16%	6.41%
Special Education Administrators	192.3	$42,103	$ 8,096,493	.40%	.58%
Secondary Vocational Administrators	57.4	43,261	2,483,187	.12	.18
Other Administrators	912.4	38,402	35,037,778	1.92	2.49
Subtotal	1,162.1	$39,254	$ 45,617,458	2.44%	3.25%
Counselors	860.8	$34,905	$ 30,046,632	1.81%	2.14%
Librarians/Media Consultants	948.8	30,510	28,947,646	1.99	2.06
Reading Consultants	23.4	34,784	812,901	.05	.06
Psychologists	333.4	31,703	10,569,654	.70	.75
Social Workers	363.6	30,613	11,132,374	.76	.79
Nurses	254.2	24,713	6,283,179	.53	.45
Curriculum Coordinators	73.3	36,369	2,666,929	.15	.19
Other Support Staff	133.2	32,770	4,365,994	.28	.31
Subtotal	2,990.7	$31,707	$ 94,825,309	6.29%	6.75%
Prekindergarten and Kindergarten Teachers	1,395.7	$26,614	$ 37,144,867	2.93%	2.64%
Elementary Teachers	15,276.9	27,888	426,040,900	32.11	30.32
Middle School and Secondary Teachers	18,086.6	29,442	532,505,322	38.01	37.90
Special Education Teachers	6,685.5	26,747	178,817,002	14.05	12.73
Subtotal	41,444.7	$28,339	$1,174,508,091	87.11%	83.60%
All Licensed Staff	47,579.2	$29,529	$1,404,982,622	100.00%	100.01%

Source: Minnesota Department of Education.

TABLE 2.4

AVERAGE LICENSED STAFF SALARIES

Assignment	1974-75	1979-80	1986-87	Percent Change: 1974-75 to 1979-80	Percent Change: 1979-80 to 1986-87	Total Percent Change
SUPERINTENDENTS, PRINCIPALS, AND ASSISTANTS.						
Superintendents	$23,068	$31,778	$49,476	37.8%	55.7%	114.5%
Elementary Principals	18,664	26,776	43,455	43.5	62.3	132.8
Middle School Principals	17,925	28,076	46,043	56.6	64.0	156.9
Secondary Principals	19,545	27,613	44,950	41.3	62.8	130.0
Total	$19,950	$28,225	$45,433	41.5%	61.0%	127.8%
OTHER ADMINISTRATORS						
Special Education Administrators	$18,798	$25,363	$42,101	34.9%	66.0%	124.0%
Secondary Vocational Administrators	17,535	23,805	43,261	35.8	81.7	146.7
Other Administrators	17,249	22,998	38,404	33.3	67.0	122.6
Total	$17,388	$23,357	$39,255	34.3%	68.1%	125.8%
SUPPORT STAFF						
Counselors	$15,136	$20,461	$34,904	35.2%	70.6%	130.6%
Librarians	11,837	16,979	30,510	43.4	79.7	157.8
Other Support Staff	12,612	18,317	30,024	45.2	63.9	138.1
Total	$13,137	$18,546	$30,956	41.2%	66.9%	135.6%
TEACHERS						
Prekindergarten	$ 9,932	$12,481	$22,723	25.7%	82.1%	128.8%
Kindergarten	10,681	15,087	26,690	41.2	76.9	149.9
Elementary	10,718	15,379	28,047	43.5	82.4	161.7
Middle School	10,629	16,168	29,624	52.1	83.2	178.7
Secondary	11,863	16,676	29,373	40.6	76.1	147.6
Special Education	9,904	13,994	26,747	41.3	91.1	170.1
Total	$11,222	$15,793	$28,339	40.7%	79.4%	152.5%
Total Licensed Staff	$11,881	$16,698	$29,529	40.5%	76.8%	148.5%
Minneapolis-St. Paul Consumer Price Index-W (1967=100)[a]	155.4	239.4	339.1	54.1%	41.6%	118.2%

Source: "Information on Minnesota Licensed Public School Staff, 1984-85," Minnesota Department of Education, July 1985; "1986-87 Staff Salary Report," Minnesota Department of Education, April 2, 1987.

[a]For 1974-75 through 1984-85, CPI figures are the average of the Minneapolis-St. Paul composite CPI-W for each October and the following April. Because indices for Minneapolis-St. Paul are no longer reported on a monthly basis as of January 1987, the 1986-87 CPI figure is current as of July 1987.

tween the 1979-80 and 1986-87 school years, average salaries increased by 76.8 percent compared to a 41.6 percent rise in the CPI.[5]

Over the entire period (1974-75 to 1986-87):

- **The growth in average salaries (149 percent) exceeded the growth in the consumer price index (118 percent).**

This represents about a 26 percent real growth in average salaries.

Administrative salaries have grown faster than inflation, but slower than salaries of other staff.

In general, teacher salaries experienced the greatest growth. Between the 1974-75 and 1986-87 school years, the average teacher salary rose 152.5 percent. Increases for other groups were less: 135.6 percent for support staff; 127.8 percent for superintendents, principals, and their assistants; and 125.8 percent for other administrators.

Some caution is advised in interpreting these statistics. It is clear from the data, for example, that the average teacher salary in Minnesota increased 152.5 percent since the 1974-75 school year. It is not clear, however, what increase was received by the average teacher who worked over this entire period. Since this was a period of declining enrollment, the number of teachers also declined. Those who were laid off were typically the lower-paid, less experienced teachers. Such reductions in the number of teachers had the effect of increasing the average teacher salary because the remaining teachers were higher paid than those laid off.

Sorting out the impact of declining enrollment on average teacher salaries is complicated by the fact that the number of special education teachers more than doubled during this period. Special education teachers were generally hired at lower salaries than the existing statewide average since many of them started at the bottom of the negotiated pay scale with no years of prior experience. The impact on average salaries of hiring more special education teachers was thus opposite that of declining enrollment. The increased hiring of special education teachers tended to reduce the statewide average salary even though other teachers were not receiving lower salaries.

As a result, it is quite difficult to pinpoint the exact salary increase experienced by teachers who have taught since 1974-75. However, other data suggest that the growth in their salaries exceeded inflation and at least equalled the growth in the average salaries of other licensed staff. Table 2.5 shows the growth in the average starting and maximum salaries for teachers with bachelor's degrees or master's degrees. Starting salaries have increased by more than the CPI (about 123 percent versus 118 percent). The maximum salary for a master's degree increased by slightly more than the CPI, while the maximum for a bachelor's degree increased by less (110 percent). Since most teachers moved up the salary schedule since 1974-75 by having more years of experience or acquiring additional credits or degrees, the average salary increase for teachers who have taught since 1974-75 is likely more than the growth in the CPI and at least equal to the growth in the average salaries of other licensed staff. As a result, we conclude that:

5 Although the Minneapolis-St. Paul area CPI may not be the best index theoretically for comparisons to outstate salaries, it is used here since it is the best available index.

	Bachelor's Degree		Master's Degree	
	Starting	Maximum	Starting	Maximum
1974-75	$8,100	$11,930	$8,950	$13,280
1986-87	$18,022	$25,109	$20,018	$29,019
Percentage Change	+122.5%	+110.5%	+123.7%	+118.5%

Source: Minnesota School Board Association.

Table 2.5: Changes in Average Teacher Salaries

- **Average administrative salaries have not increased faster than the salaries of teachers or licensed support staff.**

VARIATION AMONG DISTRICTS

This section examines the differences among school districts in licensed staff-to-student ratios and average salaries. We discuss: (1) regional variation, (2) variation by enrollment of district, and (3) variation not explained by regional or size differences.

Regional Variation

Table 2.6 shows the variation among Minnesota regions in the number of licensed staff employed per 1,000 students. Three regions (see Figure 2.4) have fewer staff per 1,000 students than the statewide average. They include Region 11 (Twin Cities metropolitan area), Region 7 (east central Minnesota), and Region 10 (southeastern Minnesota). On average, these regions generally include districts with larger enrollment than the regions that are more heavily staffed. The only exception is Region 3 (northeastern Minnesota), which has just one percent more staff per 1,000 students than average. Otherwise, the pattern seems to be that:

- **Regions that include districts with larger average enrollments have fewer licensed staff per 1,000 students.**

Table 2.6 also provides a comparison between districts in the Twin Cities metropolitan area (Region 11) and outstate Minnesota (all the other regions). Metropolitan area schools have about 33 percent more support staff, 51 percent more other administrators and 6 percent more special education teachers per 1,000 students than outstate schools. However, metropolitan area schools have 12 percent fewer teachers (excluding special education) and 35 percent fewer superintendents, principals, and assistants per 1,000 students. Primarily because of fewer teachers:

TABLE 2.6

LICENSED STAFF PER 1,000 STUDENTS

	Outstate Regions								Outstate Average	Region 11: Twin Cities Metro Area	State Average	Percentage Difference of Metro Area From Outstate
	1 & 2	3	4	5	6 & 8	7	9	10				
Superintendents & Assistants	1.23	0.62	1.04	0.99	1.37	0.68	1.10	0.76	0.92	0.24	0.60	-74.1%
Principals & Assistants	2.72	2.46	2.40	2.36	2.70	1.97	2.53	2.35	2.40	1.93	2.18	-19.7
Subtotal	3.95	3.08	3.45	3.36	4.07	2.65	3.63	3.11	3.33	2.17	2.78	-34.8%
Special Education Administrators	0.28	0.34	0.33	0.32	0.22	0.33	0.25	0.20	0.28	0.26	0.27	- 6.8%
Vocational Education Administrators	0.15	0.14	0.02	0.16	0.05	0.07	0.11	0.03	0.08	0.08	0.08	- 9.0
Other Administrators	1.12	1.07	1.12	0.80	0.88	1.00	1.18	0.65	0.95	1.66	1.28	73.9
Subtotal	1.56	1.55	1.47	1.28	1.16	1.40	1.54	0.88	1.32	1.99	1.63	51.5%
Counselors	0.92	1.25	1.14	1.12	0.97	1.05	1.19	1.14	1.10	1.33	1.21	21.5%
Librarians/Media Generalists	1.33	1.39	1.41	1.44	1.47	1.37	1.54	1.19	1.37	1.29	1.33	- 6.5
Reading Consultants	0.00	0.00	0.06	0.05	0.03	0.04	0.03	0.01	0.03	0.04	0.03	55.7
Psychologists	0.38	0.31	0.44	0.46	0.52	0.41	0.22	0.43	0.40	0.55	0.47	36.7
Social Workers	0.19	0.54	0.24	0.25	0.26	0.42	0.13	0.27	0.31	0.74	0.51	136.2
Nurse	0.07	0.32	0.15	0.22	0.29	0.20	0.14	0.18	0.21	0.53	0.36	151.7
Coordinators	0.02	0.12	0.07	0.10	0.05	0.09	0.09	0.09	0.08	0.13	0.10	52.8
Other Support	0.08	0.26	0.14	0.18	0.09	0.16	0.12	0.07	0.14	0.24	0.19	75.0
Subtotal	2.98	4.20	3.64	3.81	3.68	3.74	3.47	3.38	3.64	4.84	4.20	32.9%
Teachers (Excluding Spec. Ed.)	57.64	49.47	53.68	53.60	56.60	46.99	54.62	49.33	51.84	45.40	48.83	-12.4%
Special Education Teachers	10.25	9.18	9.44	9.46	9.18	8.88	7.79	9.25	9.14	9.68	9.39	5.9
Subtotal	67.89	58.65	63.12	63.06	65.79	55.86	62.41	58.58	60.98	55.08	58.22	- 9.7%
ALL LICENSED STAFF	76.38	67.48	71.68	71.51	74.69	63.65	71.05	65.95	69.26	64.08	66.83	- 7.5%
Percentage Difference From State Average	14.3%	1.0%	7.3%	7.0%	11.8%	-4.8%	6.3%	-1.3%	3.6%	-4.1%	0.0%	
Average Enrollment Per District	613	1,607	805	995	609	1,645	784	1,310	981	6,942	1,640	

Source: Minnesota Department of Education.

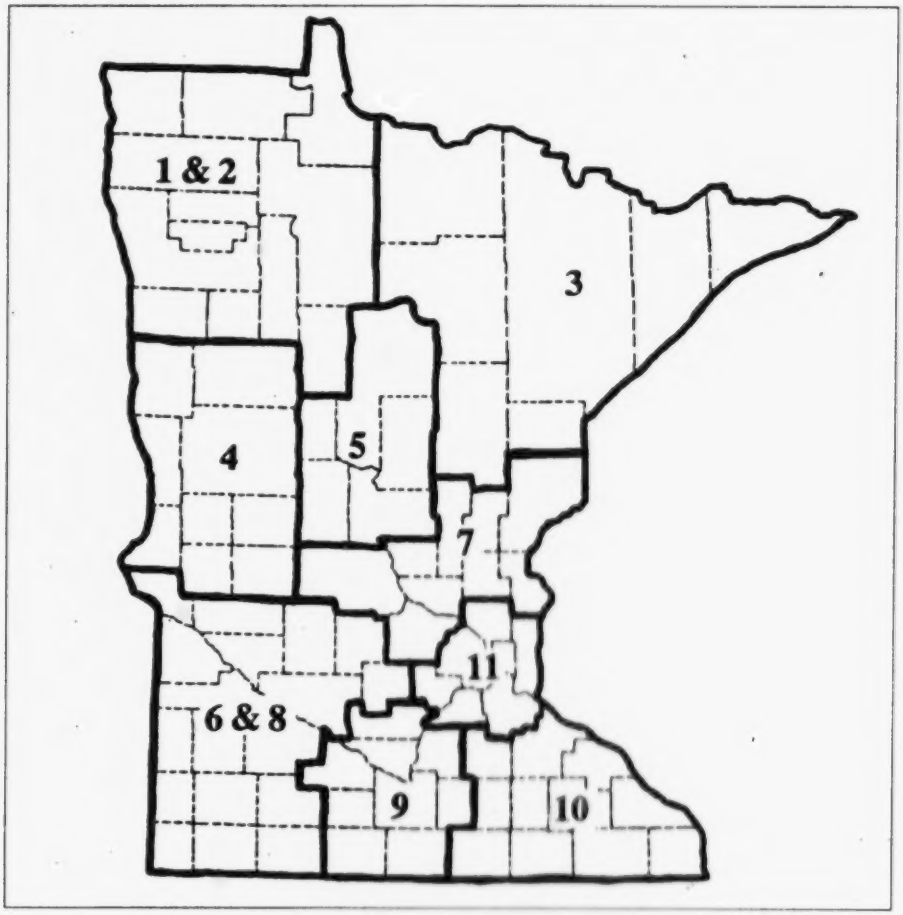


Figure 2.4: Minnesota Education Regions

- **The metropolitan Twin Cities area has about 7 percent fewer licensed staff per 1,000 students than outstate Minnesota.**

Metropolitan area districts have fewer staff but higher salaries than outstate districts.

Table 2.7 shows how average salaries vary by region. The principal difference among regions is that:

- **Twin Cities metropolitan area schools pay salaries that are 10 percent higher than the statewide average, or 19 percent above the salaries paid by outstate schools.**

Region 3 schools also pay above average salaries but they are less than one percent above average.

Metropolitan area salaries appear to be uniformly higher than outstate salaries across different staff categories. Metro salaries are 19 percent higher for teachers, 20 percent higher for administrators, 22 percent higher for support staff, and 23 percent higher for superintendents, principals, and their assistants.

TABLE 2.7

AVERAGE LICENSED SALARIES BY REGION
1986-87

Licensed Staff	Outstate Regions 1 & 2	3	4	5	6 & 8	7	9	10	Outstate Average	Region 11: Twin Cities Metro Area	State Average	Percentage Difference of Metro Area From Outstate
Superintendents	$43,351	$49,795	$46,355	$45,959	$42,395	$51,256	$43,971	$47,637	$45,950	$65,365	$48,484	42.3%
Assistant Superintendents	51,513	47,277	52,348	48,659	49,645	54,139	50,205	54,864	51,897	59,429	56,037	14.5
Principals	37,261	43,114	39,208	39,863	37,099	43,718	38,366	40,931	40,149	51,162	43,992	27.4
Assistant Principals	37,886	42,373	39,026	37,644	39,246	43,840	40,889	40,098	40,960	47,842	45,639	16.8
Subtotal	$39,247	$44,310	$41,511	$41,594	$39,002	$45,773	$40,283	$42,648	$41,942	$51,521	$45,434	22.8%
Special Education Administrators	$37,933	$41,918	$36,831	$36,467	$39,476	$37,591	$35,445	$43,938	$39,138	$45,714	$42,101	16.8%
Vocational Education Admin.	38,468	39,697	36,203	41,487	35,672	42,575	38,722	45,343	39,980	47,357	43,261	18.5
Other Administrators	33,177	37,205	33,009	30,577	30,476	34,299	31,539	36,414	33,783	41,423	38,403	22.6
Subtotal	$34,552	$38,463	$33,912	$33,422	$32,438	$35,495	$32,701	$38,414	$35,316	$42,211	$39,255	19.5%
Counselors	$29,782	$32,647	$29,086	$29,124	$28,601	$32,181	$30,645	$31,927	$30,940	$38,612	$34,903	24.8%
Librarians/Media Generalists	25,255	29,288	27,184	27,828	24,553	28,772	27,135	29,070	27,583	34,067	30,510	23.5
Reading Consultants	31,650	N/A	28,296	26,922	31,497	27,197	35,891	29,780	29,236	38,833	34,784	32.8
Psychologists	28,154	30,313	27,655	25,770	28,782	26,285	29,610	30,437	28,478	34,383	31,703	20.7
Social Workers	26,296	26,569	24,401	21,487	24,856	25,944	24,002	28,532	25,988	32,838	30,613	26.4
Nurse	19,165	21,985	25,449	21,801	18,758	21,784	22,293	23,096	21,648	26,096	24,713	20.6
Coordinators	36,830	35,417	27,514	32,428	36,993	30,235	33,791	38,759	34,223	37,964	36,369	10.9
Other Support	26,073	28,297	23,275	24,088	27,196	28,479	30,962	27,580	27,467	36,215	32,770	31.9
Subtotal	$27,032	$29,569	$27,459	$27,136	$26,077	$28,769	$28,564	$30,071	$28,375	$34,552	$31,705	21.8%
Teachers (excluding spec. ed.)	$25,185	$28,928	$25,561	$25,320	$24,150	$26,792	$25,403	$27,568	$26,324	$31,657	$28,645	20.3%
Special Education Teachers	24,415	27,277	24,446	23,955	22,904	24,935	24,128	25,417	24,866	28,765	26,747	15.7
Subtotal	$25,069	$28,669	$25,394	$25,115	$23,976	$26,497	$25,244	$27,228	$26,106	$31,149	$28,339	19.3%
ALL LICENSED STAFF	$26,072	$29,665	$26,449	$26,145	$25,029	$27,632	$26,337	$28,251	$27,160	$32,439	$29,529	19.4%
% Difference From State Average	-11.7%	0.5%	-10.4%	-11.5%	-15.2%	- 6.4%	-10.8%	- 4.3%	- 8.0%	9.9%		

Source: Minnesota Department of Education.

Table 2.8 summarizes the variation in staffing and salaries by region and presents data on the combined impact of variation in staffing and salaries. Overall, we find that:

- **Licensed salary costs per student are 5 percent higher in the metropolitan Twin Cities area schools than the statewide average, or 10 percent higher than outstate schools.**

	Percent Deviation From Average		
Region	Licensed Staff Per 1,000 Students	Average Licensed Salaries	Licensed Salaries Per Student
1 & 2	+14.3%	-11.7%	+ 0.9%
3	+ 1.0	+ 0.5	+ 1.4
4	+ 7.3	-10.4	- 3.9
5	+ 7.0	-11.5	- 5.3
6 & 8	+11.8	- 5.2	- 5.3
7	- 4.8	- 6.4	-10.9
9	+ 6.3	-10.8	- 5.2
10	- 1.3	- 4.3	- 5.6
Outstate Subtotal	+ 3.6	- 8.0	- 4.7
11-Twin Cities Metro Area	- 4.1	+ 9.9	+ 5.3

Source: Minnesota Department of Education.

Table 2.8: Staffing and Salary Variation By Region

This result occurs because the lower staffing ratios in the metropolitan area are more than offset by the area's higher salaries.

Variation by Enrollment of School District

In this section we examine how staffing ratios and average salaries vary across school districts with differing enrollments. To facilitate this analysis, we ranked Minnesota's 434 operating school districts by their fall 1986 enrollment and then divided them into ten approximately equal groups. As Table 2.9 shows, Group 1 includes the smallest 44 districts in Minnesota, with enrollments ranging from 69 to 228 students. Group 10 includes the largest 43 districts, with enrollments ranging from 3,770 to 39,572 students. Groups 1 through 5 include half of Minnesota's school districts, but less than 11 percent of its total enrollment. Group 10, with only one-tenth of the districts, accounts for almost 55 percent of enrollment.

For each group of districts, we computed the number of licensed staff per 1,000 students for the 1986-87 school year. These data are presented in Table 2.10.

Group	Number of Districts	Range of District Enrollments	Average Enrollment Per District	Total Group Enrollment	Percent of State Enrollment
1	44	69 to 228	164	7,217	1.0%
2	44	231 to 293	257	11,313	1.6
3	44	299 to 383	340	14,978	2.1
4	44	386 to 474	432	19,024	2.7
5	43	475 to 626	558	24,011	3.4
6	43	641 to 847	744	31,999	4.5
7	43	848 to 1,142	986	42,382	6.0
8	43	1,175 to 1,742	1,415	60,834	8.6
9	43	1,777 to 3,732	2,589	111,317	15.6
10	43	3,770 to 39,572	9,042	388,825	54.6
State	434	69 to 39,572	1,640	711,900	100.1%

Source: Minnesota Department of Education.

Table 2.9: School Districts Grouped by Enrollment Fall 1986

Overall, we found that:

- **The larger districts employ fewer licensed staff per 1,000 students.**

The number of staff per 1,000 students varies from 94 for the smallest districts (Group 1) to less than 63 for the largest districts (Group 10). As indicated in Figure 2.5, Group 1 districts have 44 percent higher staffing ratios than the statewide average. Only Groups 9 and 10 have below average ratios--both about 4 percent below average.

The economies of scale for larger districts are particularly evident in the employment of teachers. The number of teachers per 1,000 students varies from 82 for Group 1 districts to 54 for districts in Group 10. As Figure 2.6 indicates:

- **The smallest districts (Group 1) employ 45 percent more teachers per 1,000 students than the state average, while the largest districts (Group 10) have teacher ratios that are 5 percent below average.**

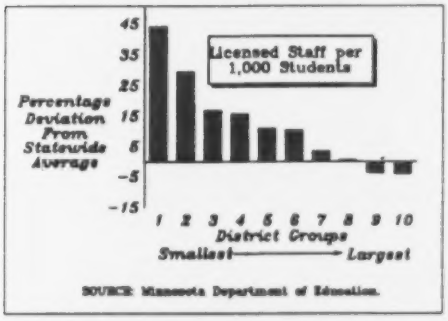


Figure 2.5: Licensed Staffing Levels by District Enrollment

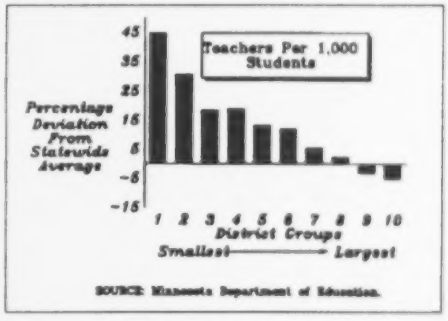


Figure 2.6: Teacher Staffing Levels by District Enrollment

Among other licensed staff, the pattern is somewhat different. As Table 2.10 indicates:

- **Larger districts have fewer administrators per 1,000 students than average.**

- **However, larger districts have more support staff such as counselors, psychologists, and social workers than average.**

When administrators and support staff are combined, the overall pattern (see Figure 2.7) shows some economies of scale as districts get larger, but also reflects the higher ratios of support staff hired by larger districts. In particular:

- **The smallest 30 percent of the districts (Groups 1, 2, and 3), as well as the largest 10 percent of the districts (Group 10) have higher than average numbers of other licensed staff per 1,000 students.**

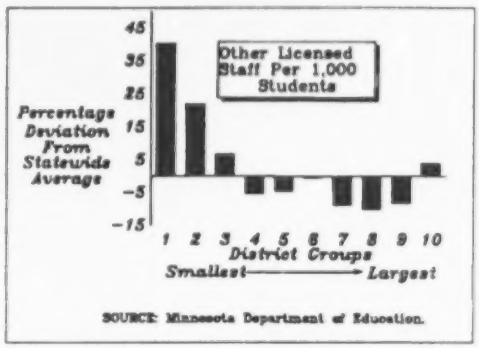


Figure 2.7: Other Licensed Staffing Levels by District Enrollment

Larger districts have lower staffing levels but higher salaries.

The variation in average licensed salaries is the opposite of that for overall staffing ratios:

- **Districts with larger enrollments generally pay higher salaries to licensed staff.**

Average licensed salaries vary from $22,296 (or 25 percent below the state average) for the smallest group of districts to $32,230 (or 9 percent above the state average) for the largest group of districts (Figure 2.8). The pattern is similar for both teachers and other licensed staff. As Table 2.11 shows, average teacher salaries range from $21,350 (or 25 percent below average) for Group 1 to $30,994 (9 percent above average) for Group 10. Average salaries for other licensed staff vary from $28,942 (23 percent below average) to $39,902 (6 percent above average).

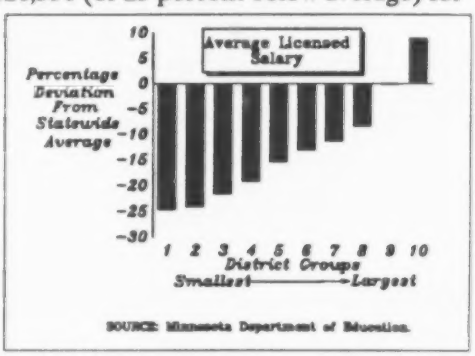


Figure 2.8: Licensed Salary Levels by District Enrollment

Clearly, staffing ratios and average salaries are two of the most important factors affecting a school district's costs per student. Yet, the two factors are affected differently by a district's enrollment. Larger districts have lower staffing ratios but have higher average salaries.

TABLE 2.10

LICENSED STAFF PER 1,000 STUDENTS
WITH DISTRICTS GROUPED BY ENROLLMENT
1986-87

	←Small Districts GROUP Large Districts→										
	1	2	3	4	5	6	7	8	9	10	State Average
Superintendents & Assistants	3.66	2.40	2.20	1.88	1.61	1.33	0.95	0.70	0.53	0.21	0.60
Principals & Assistants	4.59	4.16	3.49	3.27	2.88	2.73	2.20	2.09	2.08	1.93	2.18
All Other Administrators	0.97	1.13	0.91	0.69	0.65	0.58	1.17	1.13	1.30	1.90	1.52
Subtotal[a]	9.22	7.69	6.60	5.84	5.14	4.64	4.32	3.92	3.91	4.04	4.30
Counselors	0.43	0.76	0.70	0.61	0.81	1.27	1.14	1.09	1.31	1.30	1.21
Librarians/Media Generalists	2.06	1.65	1.39	1.40	1.50	1.57	1.51	1.44	1.29	1.25	1.33
Other Support Staff	0.03	0.10	0.23	0.06	0.51	0.84	0.65	1.07	1.16	2.10	1.52
Subtotal	2.51	2.51	2.32	2.07	2.83	3.68	3.30	3.59	3.76	4.64	4.06
SUBTOTAL: ALL NON-TEACHERS	11.73	10.20	8.92	7.91	7.96	8.32	7.62	7.51	7.66	8.68	8.36
% Difference From Average	40.3%	22.0%	6.7%	-5.4%	-4.8%	-0.5%	-8.8%	-10.2%	-8.4%	3.8%	--
Teachers (Excluding Spec. Ed.)	76.27	67.95	60.32	60.35	56.00	55.07	52.65	49.93	47.08	44.94	48.41
Special Education Teachers	6.09	6.35	7.01	7.25	8.40	8.69	7.29	8.24	7.93	8.93	8.43
SUBTOTAL: ALL TEACHERS	82.36	74.30	67.33	67.60	64.40	63.76	59.94	58.17	55.01	53.88	56.84
% Difference From Average	44.9%	30.7%	18.5%	18.9%	13.3%	12.2%	5.4%	2.3%	-3.2%	-5.2%	--
TOTAL: ALL LICENSED STAFF	94.09	84.51	76.26	75.51	72.36	72.08	67.55	65.68	62.67	62.56	65.20
% Difference From Average	44.3%	29.6%	17.0%	15.8%	11.0%	10.6%	3.6%	0.7%	-3.9%	-4.0%	--

Source: Minnesota Department of Education.

[a]Subtotals and totals may not add exactly due to rounding.

TABLE 2.11

AVERAGE LICENSED SALARIES BY ENROLLMENT OF DISTRICT
1986-87

Group	Average Enrollment	Average Base Salary: Teachers	Percent Deviation From Average	Average Base Salary: Other Licensed Staff	Percent Deviation From Average	Average Base Salary: All Licensed Staff	Percent Deviation From Average
1	164	$21,350	-24.8%	$28,942	-23.2%	$22,296	-24.7%
2	257	21,467	-24.4	29,499	-21.8	22,437	-24.2
3	340	22,026	-22.4	32,021	-15.1	23,196	-21.6
4	432	22,817	-19.7	33,070	-12.3	23,891	-19.3
5	558	23,946	-15.7	33,833	-10.2	25,034	-15.4
6	744	24,656	-13.2	33,829	-10.3	25,714	-13.1
7	986	25,168	-11.4	34,526	- 8.4	26,223	-11.4
8	1,415	26,118	- 8.0	34,579	- 8.3	27,085	- 8.5
9	2,589	28,438	0.1	37,602	- 0.2	29,558	- 0.1
10	9,042	30,994	9.1	39,902	5.8	32,230	8.9
State	1,640	$28,403	0.0%	$37,698	0.0%	$29,594[a]	0.0%

Source: Minnesota Department of Education.

[a]Statewide salary figures differ slightly from the regional figures in Table 2.7 since this analysis does not include staff hired by cooperatives or intermediate districts.

We combined the two factors--staffing and salaries--to compare the licensed salary cost per student across districts of different enrollment. We found that the lower staffing ratios for the largest group of districts are more than offset by the higher salaries paid by those districts. As indicated in Figure 2.9:

- **Only the smallest districts (Group 1) and the largest districts (Group 10) have above average salary costs per student.**

In addition, the amount of variation among the ten groups is less than for either staffing or salary alone. Salary costs per student range from less than 9 percent above average for Group 1 to about 8 percent below average for Groups 3 and 7. This still represents about a 19 percent difference in salary costs per student between Group 1 and Group 3.

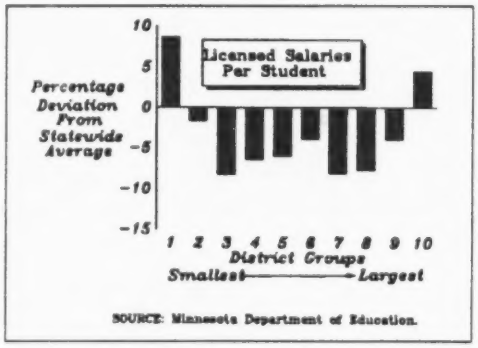


Figure 2.9: Variation in Licensed Salary Costs by District Enrollment

Other Variation

While staffing ratios and salaries are affected by district enrollment and regional factors, it is also apparent that considerable variation is probably not explained by these factors. Table 2.12 shows the range in salary costs per student within each of the ten district groups. In each group, the highest cost district has at least 40 percent greater salary costs per student than the district with the lowest costs. In two groups, the district with the highest costs has costs that are more than double the lowest cost district.

Group	Low District	High District	Percent Difference
1	$1,760	$3,547	101.5%
2	1,334	2,512	88.3
3	1,406	2,241	59.4
4	1,498	2,125	41.9
5	1,116	2,581	131.3
6	1,545	2,278	47.4
7	1,415	2,385	68.6
8	1,504	2,287	52.1
9	1,563	2,309	47.7
10	1,586	2,575	62.4

Source: Minnesota Department of Education.

Table 2.12: Range of Licensed Salary Costs Per Student Within District Groups 1986-87

Table 2.13 provides more detailed information on the 24 Twin Cities suburban school districts in Group 10, the largest group of districts. These data show that:

- **Staffing and salary levels vary significantly even among the 24 large suburban districts in the Twin Cities metropolitan area.**

	Low District	High District	Percent Difference
AVERAGE SALARIES			
Teachers	$26,333	$35,866	36.2%
Other Licensed Staff	35,751	47,027	31.5
All Licensed Staff	27,519	37,585	36.6
LICENSED STAFF PER 1,000 STUDENTS			
Teachers	44.95	57.15	27.1%
Other Licensed Staff	5.04	12.01	138.3
All Licensed Staff	51.66	68.97	33.5

Source: Minnesota Department of Education.

Table 2.13: Range of Salaries and Staffing Ratios Among Large Suburban Districts in the Twin Cities Area 1986-87

There is considerable variation in staffing and salary levels even among large, suburban districts.

Average licensed salaries vary from $27,519 to $37,585--a spread of 37 percent. The number of teachers per 1,000 students ranges from 45 to 57--a difference of 27 percent. Finally, the number of other licensed staff (administrators and support personnel) varies from 5 to 12 full-time equivalents per 1,000 students--a range of 140 percent.

Some of these differences, such as the variation in staffing levels, probably reflect differences in the preferences of district administrators, school boards, and parents for school services. The variation in average salaries, however, is also affected by recent trends in a district's enrollment.

In a number of instances, the lower-cost districts appear to be districts with growing enrollments, while some of the higher-cost districts have experienced substantial declines in enrollment. It is logical that districts with declining enrollment would have higher average salaries and thus tend to have higher than average costs per student. As districts reduce their teaching staff, the lower paid teachers are laid off first--resulting in increased average salaries. Similarly, districts with increasing enrollment are hiring more teachers and generally hiring them at the lower end of the pay scale. Thus, increasing enrollment can result in lower average salaries and possibly lower costs per student.

In addition, other factors such as the socioeconomic status of a district's resident population or student enrollment may affect staffing levels and costs per student. To isolate the effect of such factors, one would need to use sophisticated statistical techniques. Since it was not the purpose of this report to pinpoint the contribution of particular factors, we have not used such techniques. Nevertheless, we can conclude that:

- **There is considerable variation in staffing and salary levels that is not explained by a district's enrollment or regional location.**

SUMMARY

The data presented in this chapter show that:

- **There is little or no evidence that administrative staffing or salary levels have grown faster than those for teachers and licensed support staff.**

Administrative staffing and salary levels grew slower than average.

The number of superintendents, principals, and their assistants per 1,000 students grew by 6 percent between the 1975-76 and 1986-87 school years. Other administrators (excluding special education) grew by nine percent relative to enrollment. This compares to a 14 percent increase in licensed staffing levels during this period.

The biggest growth occurred among special education teachers and administrators, a group that doubled relative to enrollment. Substantial growth also occurred in the category of other licensed support staff (including psychologists, social workers, nurses, and others), which grew by more than 50 percent compared to enrollment. The growth in special education staffing was primarily a result of increasing federal and state mandates to fully and adequately serve handicapped children.[6]

The cumulative growth in administrative salaries since the mid-1970s has exceeded inflation but has been less than the growth in average salaries for teachers and licensed support staff. Average administrative salaries grew about 127 percent since the 1974-75 school year, compared to 153 percent for teachers, 136 percent for support staff, and a 118 percent increase in the Twin Cities Consumer Price Index.

We also found that:

- **There is considerable variation in staffing and salary levels among Minnesota school districts--some of which is explained by district enrollment and location.**

Larger districts have lower staffing levels, but pay higher salaries. Twin Cities metropolitan area districts have 7 percent lower staffing levels than outstate districts, but pay 19 percent higher salaries.

There is also variation in staffing and salaries that is not explained by district enrollment or location. Even among the 24 large, suburban districts in the Twin Cities area, we found considerable variation in staffing and salary levels. Interestingly, the number of licensed administrators and support staff per

6 Our 1984 report on special education pointed out, however, that some Minnesota school districts have overidentified the number of special education students, particularly those with learning disabilities.

1,000 students varies from 5 to 12 in this group of suburban districts--a range of close to 140 percent. This difference suggests that, even though the number of administrative staff has not grown faster than other staff on a statewide basis, there may be significant differences among similar districts in how many administrators they employ.

NATIONAL COMPARISONS

Chapter 3

Chapters 1 and 2 examined educational spending, staff, and salary trends in Minnesota during the 1970s and 1980s. We found that, in the last ten years, spending per pupil has grown faster than inflation and that the number of professional staff, particularly special education staff, has grown relative to enrollment in Minnesota schools.

This chapter provides an additional perspective on these trends by comparing Minnesota to other states. In particular, it focuses on the following questions:

- **How do educational spending and staffing levels in Minnesota compare to national averages?**
- **How do expenditure and staffing trends in Minnesota compare to nationwide trends?**
- **What accounts for the differences between Minnesota spending and staffing levels and national averages?**

This chapter is divided into two sections. We first present data that compare Minnesota spending to other states. Then, we examine how Minnesota staffing and salaries vary from national averages.

EXPENDITURES

There are two major sources of data that compare educational expenditures across states: (1) the Bureau of the Census, United States Department of Commerce, and (2) the National Education Association. The two sources use different definitions of "expenditures." The National Education Association collects data on current operating expenditures, while the Bureau of the Census collects data on general expenditures, which include current operating expenditures as well as capital, interest, and other non-operating expenses.

Based on data available from these two sources, we compared Minnesota and other states on four different measures:

1. General expenditures per capita.

2. Current operating expenditures per student.

3. General expenditures per $1,000 of personal income.

4. Current operating expenditures per student as a percentage of average personal income.

These four comparisons are presented below. An analysis of the results follows.

General Expenditures per Capita

One of the more commonly cited comparisons of elementary-secondary education spending is the data on expenditures per capita published by the Bureau of the Census. These data, presented in Table 3.1, show that:

Minnesota spends 19 percent more per resident than other states.

- **In fiscal year 1985, Minnesota spent 19 percent more per capita than the national average and ranked sixth among the 50 states.**

- **Minnesota's relative position among the states has declined since fiscal year 1971 when the state spent 31 percent more per capita than the national average and ranked third.**

Fiscal Year	U.S. Average	Minnesota	Minnesota Per Capita Rank	Percent Above U.S. Average
1971	$202.49	$266.35	3	31%
1972	219.27	283.43	6	29
1973	232.49	297.46	5	27
1974	251.00	299.20	6	19
1975	288.50	347.32	6	20
1976	315.26	372.80	6	18
1977	329.79	379.60	10	15
1978	351.73	403.21	8	15
1979	378.85	417.79	16	10
1980	410.28	460.40	14	12
1981	443.77	499.68	11	13
1982	468.34	572.77	6	22
1983	482.71	575.89	7	19
1984	511.93	608.35	8	19
1985	552.85	656.70	6	19

Source: Bureau of the Census, United States Department of Commerce.

Table 3.1: General Per Capita Expenditures of State and Local Governments for Elementary and Secondary Education

Careful examination of the data indicate, however, that Minnesota's relative position declined through 1979 and then rose. Between 1971 and 1979, per capita spending increased 57 percent in Minnesota compared to 87 percent nationally. Since then, Minnesota's spending increased faster than the national average -- another 57 percent compared to 46 percent nationally. In fact:

- **Since fiscal year 1979, Minnesota's rank among the 50 states has increased from 16 to 6 and its per capita spending has risen from 10 percent to 19 percent above the national average.**

- **Minnesota's rank of sixth is the same as it was in 1972 and its relative spending position of 19 percent above average is the same as it was in 1974.**

Operating Expenditures per Student

Per capita spending comparisons are useful when one examines spending across a variety of different areas (such as education, transportation, welfare, public safety, and others). However, when considering a single area, more meaningful comparisons can often be made.

For education, it is perhaps more appropriate to compare spending per student rather than per capita since states may differ in the percentage of their population that is in school. In fact, one might expect Minnesota to rank somewhat lower in spending per student than per capita. Minnesota has about 2 to 3 percent more students per 1,000 residents than the national average.

National comparisons of spending per pupil are available from the National Education Association. Table 3.2 presents these data for fiscal years 1971 through 1986. Only current operating expenditures are included in the NEA

Fiscal Year	U.S. Average	Minnesota	Minnesota Rank	Percent Above U.S. Average
1971	$ 868	$ 878	18	1%
1972	970	1,039	13	7
1973	1,035	1,160	10	12
1974	1,143	1,321	9	16
1975	1,286	1,452	12	13
1976	1,441	1,542	13	7
1977	1,594	1,822	10	14
1978	1,751	1,929	14	10
1979	1,971	2,253	12	14
1980	2,230	2,561	10	15
1981	2,464	2,857	11	16
1982	2,721	2,963	14	9
1983	2,960	3,136	17	6
1984	3,183	3,373	20	6
1985	3,457	3,671	17	6
1986	3,785	4,008	15	6

Source: "Rankings of the States," National Education Association, 1972 through 1987.

Table 3.2: Current Operating Expenditures Per Average Daily Attendance

data. We have used "average daily attendance" as the measure of student enrollment since it appears to be the most consistently used enrollment figure across the nation.

Minnesota spends six percent more per student than other states.

Table 3.2 shows that:

- **Minnesota's spending per student was 6 percent higher than the national average in 1986 and ranked 15th highest of the 50 states.**
- **Minnesota's spending rose from one percent above the national average in 1971 to 16 percent above average in 1981, but has since declined to 6 percent above average.**

Minnesota's relative decline in spending occurred primarily in 1982 and 1983, when Minnesota had numerous budget deficit problems.

Measures of Ability to Pay

Another comparison method used by the United States Bureau of the Census is a calculation of elementary and secondary education expenditures per $1,000 of personal income. This measure does not adjust for a state's population or its student enrollment but does adjust for a state's ability to pay for public education.

Table 3.3 shows that:

- **In 1985 Minnesota's general expenditures per $1,000 of personal income were 14 percent higher than the national average and ranked tenth among the states.**
- **Minnesota's relative spending position has declined since 1971 when it spent 36 percent above average and ranked sixth.**

Fiscal Year	U.S. Average	Minnesota	Minnesota Rank	Percent Above U.S. Average
1971	$52.27	$70.90	6	36%
1976	53.82	64.85	7	20
1977	51.94	61.55	9	19
1978	50.52	57.03	8	13
1979	48.80	53.50	16	10
1980	48.13	52.15	15	8
1981	46.48	51.25	14	10
1982	44.11	52.96	9	20
1983	43.92	51.67	8	18
1984	44.22	51.28	11	16
1985	43.70	49.95	10	14

Source: Bureau of the Census, United States Department of Commerce.

Table 3.3: General Expenditures of State and Local Governments For Elementary and Secondary Education Per $1,000 of Personal Income

Since 1971, Minnesota's spending declined from $70.90 to $49.95 per $1,000 of personal income, or 30 percent. The national average declined from $52.27 to $43.70, or 16 percent. Alternatively, one could say that the percentage of personal income that is spent by state and local governments on education has declined from 7.1 to 5.0 percent in Minnesota while the percentage declined from 5.2 to 4.4 percent nationwide.

The substantial decline in dollars spent per $1,000 of personal income should not be alarming. The decline can be primarily attributed to the decline in enrollment Minnesota has experienced over this period. It is appropriate that a state would spend a smaller fraction of its personal income on public education as the number of students declines.

It is possible to construct an alternative comparison measure that adjusts not only for a state's ability to pay but also for its student enrollment. In Table 3.4 we present such a measure, calculating operating expenditures per student as a percentage of a state's per capita personal income. Table 3.4 shows that:

- **Minnesota's spending per student has remained nearly constant for over a decade at about 28 percent of its per capita personal income.**

- **Nationally, spending per student as a percentage of per capita personal income has increased gradually from 25 to 27 percent.**

It appears that, by this measure, other states have increased the percentage of their residents' income that they are spending per student, thus bringing the national average closer to the percentage spent in Minnesota.

Fiscal Year	U.S. Average	Minnesota
1976	25%	27%
1977	27	29
1978	25	27
1979	25	28
1980	25	29
1981	26	29
1982	26	28
1983	27	28
1984	27	28
1985	27	29
1986	27	28

Source: National Education Association and Bureau of the Census.

Table 3.4: Operating Expenditures Per Average Daily Attendance as a Percentage of Per Capita Personal Income

Minnesota's educational spending exceeds the national average.

Analysis

All of the spending measures agree that:

- **Minnesota's educational spending is above the national average.**

However, there are several points of disagreement among the measures. First, the per capita spending measure used by the Census Bureau shows Minnesota spending to be more above the national average than the per student measure used by the NEA. In 1985, per capita spending was 19 percent above the national average while per student spending was only 6 percent above average.

This difference occurs in part because Minnesota has two to three percent more students per 1,000 residents than the rest of the nation. However, most of the difference is not due to Minnesota's relatively larger student population. Converting the Census Bureau data from a per capita basis to a per student basis would result in Minnesota being about 16, rather than 19, percent above average.

The remaining difference between 16 and 6 percent above average probably occurs because the Census Bureau includes certain expenditures not included by the NEA. For example, the Census Bureau apparently includes the tax credits received by Minnesota taxpayers for certain private and public school expenses. Also, the Census Bureau includes capital expenditures not in the NEA spending figures. Table 3.5 shows that Minnesota's capital outlay expenditures have consistently exceeded the national average over the last decade although the percentage above average has varied considerably from year to year. Over the last ten years:

- **Minnesota's per capita expenditures for educational capital outlay have exceeded the national figure by 21 percent on average.**

Capital expenditures have consistently exceeded the national average.

Fiscal Year	U.S. Average	Minnesota	Percent Above U.S. Average
1971	$23.49	$41.61	77%
1976	30.50	42.30	39
1977	27.65	29.21	6
1978	26.18	32.34	24
1979	28.94	31.31	8
1980	32.50	40.84	26
1981	32.85	41.51	26
1982	30.63	36.92	21
1983	30.77	34.51	12
1984	30.73	36.30	18
1985	37.06	49.80	34

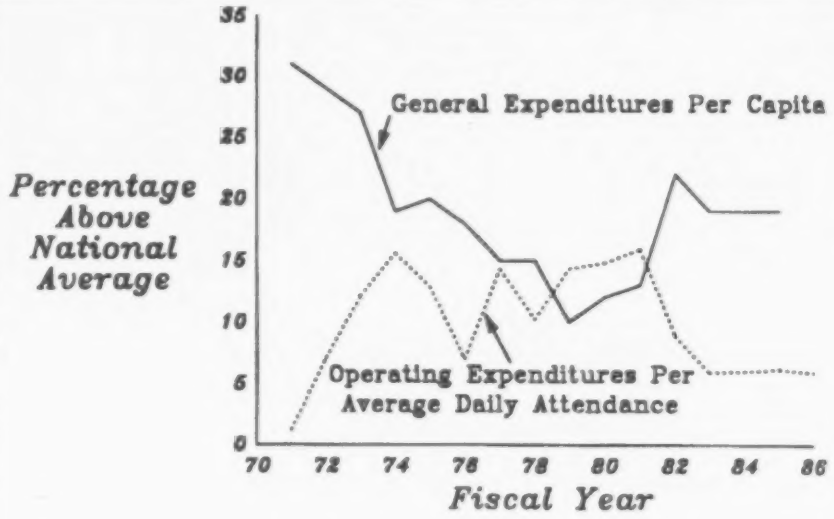
Source: Bureau of the Census, United States Department of Commerce.

Table 3.5: Per Capita Expenditures of State and Local Governments For Capital Outlay

A second point of disagreement among the spending measures lies in the trend of Minnesota spending over the last 15 years. As indicated in Figure 3.1, the per capita and per student spending measures show quite opposite trends:

- **Minnesota's spending per capita fell during the 1970s relative to the national average but has generally increased during the 1980s.**

- **Minnesota's spending per student rose relative to the national average during the early 1970s, generally remained constant through 1981, but has slipped back some since then.**



SOURCE: National Education Association and U.S. Bureau of the Census.

Figure 3.1: Minnesota Spending Compared to National Averages

It is not entirely clear why these two spending measures show such different trends. Presumably, the different definitions of expenditures (general versus current operating) and the different denominators (state population versus students) used by the Census Bureau and the NEA account for the difference in the trends. However, it was not possible to determine the exact contribution of each since detailed historical data on the difference in expenditure definitions were not available.

STAFFING AND SALARIES

There are two major sources of national data on educational staffing. First, the United States Department of Education's Center for Education Statistics provides state-by-state figures on the number of full-time equivalent staff in nine categories. Second, the National Education Association publishes data on three types of instructional staff.

In this section, we first examine these two main sources of staffing data.[1] We then analyze some additional data available on special education teachers. Finally, we review available national comparisons of salaries for teachers, administrators, and certain professional support staff.

Department of Education Data

Table 3.6 summarizes our analysis of the most recent year of data from the United States Department of Education (1985-86). We found that:

	Staff Per 1,000 Students		
	U.S. Average	Minnesota	Percent Deviation From U.S. Average
District-Based Administrators	1.66	2.27	+36.8%
School-Based Administrators	3.19	2.30	-27.9
Subtotal	4.85	4.57	- 5.8%
Administrative Support Staff	3.75	4.39	+17.1%
School & Library Support Staff	4.51	4.18	- 7.3
Subtotal	8.26	8.57	+ 3.8%
Counselors	1.69	1.21	-28.4
Librarians	1.20	1.06	-11.7
Instructional Aides	7.73	8.01	+ 3.6
Teachers	55.94	58.59	+ 4.7
Other Support Services Staff	25.02	18.29	-26.9
Total (Excluding Other Support Services Staff)	79.67	82.00	+ 2.9%
Total (Including Other Support Services Staff)	104.69	100.29	- 4.2%

Source: Computed from staffing and enrollment data available from the U.S. Department of Education, Center for Education Statistics.

Table 3.6: Full-Time Equivalent Staff Per 1,000 Students

1 The Educational Research Service (ERS) also publishes national and regional student-staff ratios for various types of professional staff. However, ERS calculates ratios based on a national sample of local school districts and does not publish ratios for individual states. Data from the United States Department of Education's Center for Education Statistics are used in this report since they are more comprehensive. The department's data are based on state-by-state reports for all local school districts and educational cooperatives rather than just a sample of local school districts. They also include other types of staff not included in the ERS data.

- **Minnesota has about five percent more teachers per 1,000 students than the national average.**

- **Minnesota has about six percent fewer administrators per 1,000 students than the national average.[2]**

- **Minnesota has 28 percent fewer counselors and 12 percent fewer librarians per 1,000 students than the national averages.**

Minnesota has more teachers but fewer administrators and support staff than the national average.

Whether Minnesota has more or less staff per 1,000 students than the national average depends on whether one counts the category of "other support services staff." Without this category, Minnesota has 3 percent more staff than the national average. If this category is included, Minnesota has 4 percent fewer staff. This difference results because the data indicate that Minnesota has 27 percent fewer staff in this category.

However, it is not clear that comparisons using the data on other support services staff are useful in identifying the reasons for Minnesota's above average expenditures. This category consists primarily of unlicensed staff such as bus drivers, food service workers, and custodial and maintenance workers.[3] School districts may either hire such staff directly or contract with private companies for bus service, food service, or maintenance work. The districts contracting for services would report fewer employees in this category but would not necessarily have lower costs. As a result, comparisons based on the "other support services" category would not be useful in analyzing why a particular state has higher or lower than average costs. Minnesota's lower than average reported staffing in this category may reflect a greater use of contracting in Minnesota and not necessarily lower costs as a result.

NEA Data

The staffing data compiled by the National Education Association cover fewer types of staff than the data from the United States Department of Education. The NEA data cover three categories of professional staff: (1) classroom teachers, (2) other non-supervisory instructional staff (such as counselors, librarians, psychologists, and curriculum consultants), and (3) principals and other instructional supervisors.

These data, when combined with enrollment data, show a staffing pattern consistent with the department's data. Table 3.7 shows that Minnesota has a lower student-teacher ratio than the national average, or conversely, more teachers per 1,000 students. Also, Minnesota has fewer non-supervisory instructional staff and fewer principals and other instructional supervisors than the national average.

2 The national data suggest that Minnesota administrators are more likely to be located at the district level than in the schools. Half of the administrators in Minnesota are classified as district-based staff compared to a national average of one-third.

3 The category of "other support services" staff also includes some professional staff such as social workers and psychologists, but they represent a small portion of this category.

	Classroom Teachers	Other Non-Supervisory Instructional Staff[1]	Principals and Supervisors	Total Instructional Staff
UNITED STATES	**18**	**255**	**286**	**16**
Alabama	20	383	258	18
Alaska	17	153	484	15
Arizona	24	90	473	18
Arkansas	18	308	320	16
California	24	506	366	22
Colorado	19	297	353	17
Connecticut	14	142	192	12
Delaware	16	245	290	14
Dist. of Columbia	17	123	313	14
Florida	17	191	302	15
Georgia	19	–	406	18
Hawaii	20	134	434	16
Idaho	21	370	337	18
Illinois	18	377	299	16
Indiana	19	366	286	17
Iowa	16	272	328	14
Kansas	15	207	244	14
Kentucky	19	317	299	17
Louisiana	19	383	268	17
Maine	16	301	151	14
Maryland	18	218	220	15
Massachusetts	15	164	239	14
Michigan	21	187	391	18
MINNESOTA	**17**	**276**	**367**	**15**
Mississippi	19	332	306	17
Missouri	17	193	232	14
Montana	15	172	298	13
Nebraska	15	223	247	13
Nevada	20	240	375	18
New Hampshire	15	201	280	14
New Jersey	15	122	181	13
New Mexico	18	196	327	16
New York	15	328	204	14
North Carolina	20	273	260	17
North Dakota	15	391	277	14
Ohio	18	246	272	16
Oklahoma	17	331	314	15
Oregon	18	179	260	15
Pennsylvania	17	199	318	15
Rhode Island	15	167	213	13
South Carolina	18	216	288	16
South Dakota	15	297	247	14
Tennessee	20	233	261	17
Texas	18	303	340	16
Utah	24	322	366	21
Vermont	14	114	163	12
Virginia	17	211	272	15
Washington	21	251	258	18
West Virginia	16	289	229	14
Wisconsin	17	278	320	15
Wyoming	14	223	257	13

[1]Other non-supervisory staff include consultants, counselors, librarians, and psychological staff.

Source: Computed from selected data in the National Education Association, Estimates of School Statistics: 1985-86 (Washington: National Education Association, March 1986), pp. 32, 35, 36.

Table 3.7: Estimated Average Number of Students Per Instructional Staff Member 1985-86 School Year

Table 3.8 indicates that student-teacher ratios both in Minnesota and nationwide have declined between the 1972-73 and 1985-86 school years. In particular:

- **Minnesota's student-teacher ratio has decreased from 20 to 17, while the average ratio fell from 22 to 18 nationwide.**

Table 3.8 also suggests that Minnesota's lower student-teacher ratios are found primarily in the elementary grades. Minnesota's ratio is 18 compared to the national average of 20 for elementary schools. At the secondary level, Minnesota has a student-teacher ratio of 16 -- same as the national average.

	ELEMENTARY			SECONDARY			TOTAL		
State	1972-73	1982-83	1985-86	1972-73	1982-83	1985-86	1972-73	1982-83	1985-86
United States	**23**	**20**	**20**	**20**	**16**	**16**	**22**	**18**	**18**
Alabama	24	19	21	22	17	19	23	18	20
Alaska	22	16	18	18	15	17	20	15	17
Arizona	25	19	24	24	18	24	24	19	24
Arkansas	24	20	20	20	17	16	22	19	18
California	24	26	26	24	19	21	24	23	24
Colorado	25	21	21	21	17	16	23	19	19
Connecticut	25	18	16	13	13	12	20	16	14
Delaware	26	19	18	18	16	14	22	17	16
Dist. of Columbia	22	17	16	20	19	18	21	18	17
Florida	26	17	17	23	19	18	25	18	17
Georgia	28	19	19	20	18	19	22	18	19
Hawaii	24	17	20	28	24	19	26	20	20
Idaho	24	22	22	21	18	19	23	20	21
Illinois	23	19	19	19	16	17	21	18	18
Indiana	25	21	20	22	19	19	23	20	19
Iowa	23	18	18	18	14	14	21	16	16
Kansas	21	17	17	17	14	13	19	15	15
Kentucky	23	21	20	22	20	18	23	20	19
Louisiana	24	23	21	18	12	15	21	18	19
Maine	26	19	17	16	14	14	22	17	16
Maryland	24	19	19	20	18	16	22	19	18
Massachusetts	23	28	26	18	10	8	21	18	15
Michigan	24	23	26	24	23	15	24	23	21
MINNESOTA	**22**	**18**	**18**	**18**	**17**	**16**	**20**	**18**	**17**
Mississippi	23	18	20	22	18	17	23	19	19
Missouri	30	23	22	13	10	11	22	17	17
Montana	23	22	16	16	11	15	20	17	15
Nebraska	19	18	16	18	14	14	19	16	15
Nevada	25	21	21	24	20	19	24	20	20

Continued

Table 3.8: Average Number of Students Per Teacher By State

Student-teacher ratios have declined in Minnesota and nationwide.

	Elementary			Secondary			Total		
	1972-73	1982-83	1985-86	1972-73	1982-83	1985-86	1972-73	1982-83	1985-86
New Hamshire	22	18	15	18	14	15	20	16	15
New Jersey	23	17	17	15	14	13	19	16	15
New Mexico	22	22	17	24	16	19	23	19	18
New York	20	18	17	17	16	14	19	17	15
North Carolina	24	23	23	21	15	15	23	20	20
North Dakota	21	17	17	18	13	12	20	16	15
Ohio	26	21	21	19	18	15	23	20	18
Oklahoma	22	19	18	21	16	16	22	17	17
Oregon	23	18	19	20	18	16	22	18	18
Pennsylvania	23	19	17	20	16	16	21	17	17
Rhode Island	21	15	16	19	17	15	20	16	15
South Carolina	24	21	20	22	15	15	23	19	18
South Dakota	21	16	16	18	14	14	20	16	15
Tennessee	25	24	23	23	16	16	24	21	20
Texas	22	21	18	21	14	17	22	18	18
Utah	26	24	23	24	25	26	25	25	24
Vermont	20	16	17	14	12	12	18	14	14
Virginia	22	18	18	17	16	15	20	17	17
Washington	22	21	20	27	22	21	24	21	21
West Virginia	24	18	17	22	16	15	23	17	16
Wisconsin	21	15	17	18	14	16	20	15	17
Wyoming	20	15	12	18	13	19	19	14	14

Source: The Condition of Teaching, C. Emily Feistritzer, (The Carnegie Foundation for the Advancement of Teaching, 1983), p. 31; and Estimates of School Statistics:1985-86, (Washington: National Education Association, March 1986), pp. 32, 35, 36.

Table 3.8: Average Number of Students Per Teacher By State (continued)

Data on Special Education Teachers

Unfortunately, neither source of staffing data identifies subgroups of teachers. Because the number of special education teachers per 1,000 students has more than doubled in Minnesota since the mid-1970s, we wondered how Minnesota compared to other states. We found that the United States Department of Education, through the Office of Special Education and Rehabilitative Services, collects data on the number of special education teachers in each state.

As Table 3.9 shows, we found that:

- **Minnesota has about 25 percent more special education teachers per 1,000 students than the national average.**

- **When special education teachers are excluded, Minnesota has about the same number of classroom teachers per 1,000 students as the rest of the nation.**

Thus, the entire difference between Minnesota's student-teacher ratio and the national average is accounted for by Minnesota's greater employment of special education teachers.

Minnesota has more special education teachers than the national average.

	Teachers Per 1,000 Students		
	U.S. Average	Minnesota	Percent Deviation From U.S. Average
Based on Fall Enrollment:			
Special Education Teachers	6.92	8.78	+26.9%
Other Teachers	48.06	48.61	+ 1.1
All Teachers	54.99	57.39	+ 4.4%
Based on Average Daily Attendance:			
Special Education Teachers	7.47	9.30	+24.6%
Other Teachers	51.87	51.47	- 0.8
All Teachers	59.34	60.77	+ 2.4%
Based on Average Daily Membership:			
Special Education Teachers	7.03	8.80	+25.2%
Other Teachers	48.85	48.71	- 0.3
All Teachers	55.88	57.51	+ 2.9%

Source: Computed from data available from the U.S. Department of Education's Center for Education Statistics and the Office of Special Education and Rehabilitative Services.

Table 3.9: Special Education and Other Teachers Per 1,000 Students 1984-85

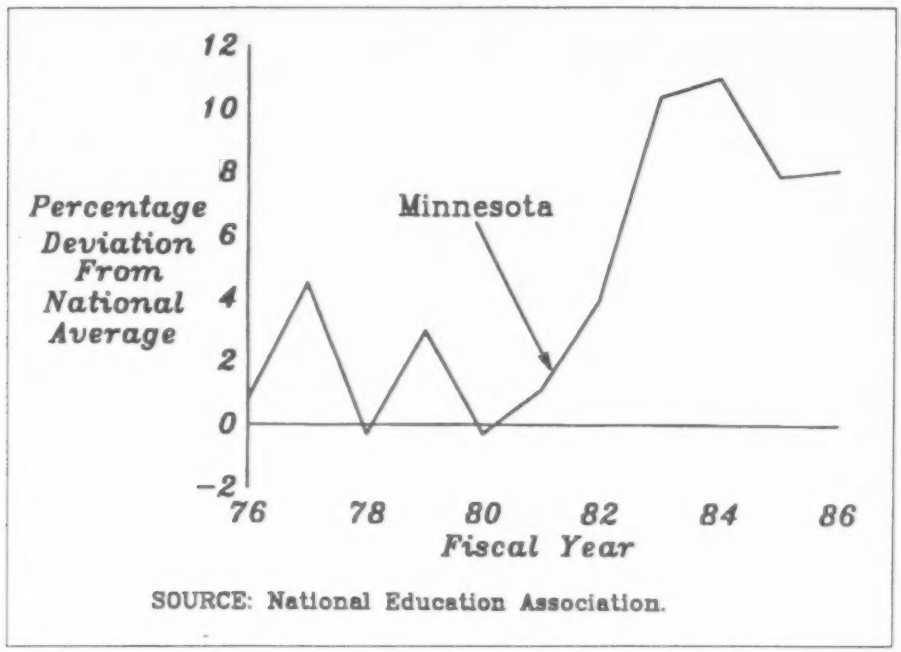
To some extent, Minnesota has more special education teachers because a greater percentage of Minnesota students receive special education. During the 1984-85 school year, 11.6 percent of Minnesota students received special education services compared to 11.0 percent nationally. This difference in the percentage of special education students accounts for about a six percent higher ratio of special education teachers to all students in Minnesota compared to the national average.

However, most of the difference in the employment of special education teachers results from Minnesota having a lower than average ratio of special education students to special education teachers. During the 1984-85 school year, Minnesota had 13.2 special education students per special education teacher, while the national average was 15.8 -- or about 16 percent higher.

Salaries

National comparison data on teacher salaries are available from the National Education Association. Figure 3.2 shows that the average teacher salary in Minnesota has generally exceeded the national average over the last decade. However, the figure shows that Minnesota salaries have grown in recent years relative to the national average:

- **Between 1976 and 1982, average teacher salaries in Minnesota did not exceed the national average by much.**



SOURCE: National Education Association.

Figure 3.2: Minnesota Teacher Salaries Compared to the National Average

- **But, since 1983, average teacher salaries in Minnesota have exceeded the national average by 8 percent or more.**

Salaries for teachers and certain support staff exceed the national average.

Comprehensive national data on administrative and other staff salaries are not generally available. However, the Educational Research Service (ERS) publishes national and regional data for some administrative and professional support staff based on a random sample of school districts. Table 3.10 shows how national data compiled by ERS compares to Minnesota salary data compiled by the Minnesota Department of Education.

Some administrative salaries are higher in Minnesota than nationally, while others are lower. In order to provide an overall comparison of administrative salaries, we weighted the percentage difference in average salary for each type of administrator by the fraction of Minnesota administrators of that type. We found that:

- **Overall, administrative salaries are about two percent below the national average.**

ERS also provides national salary data for three groups of professional support staff: nurses, counselors, and librarians. Minnesota salaries for these groups are all above the national averages calculated by ERS. Salaries are 11 percent above the national average for Minnesota nurses, 9 percent above average for Minnesota counselors, and 7 percent above the national average for Minnesota librarians. Weighting these groups as we did for administrators, we found an overall pattern similar to that for teachers:

United States		Minnesota	
Position	Average Salary	Position	Average Salary
Superintendents	$64,580	Superintendents	$48,484
Assistant Superintendents	53,656	Assistant Superintendents	56,037
Subject Area Supervisors and Instructional Services	43,787	Program and Subject Area Administrators[a]	41,248
Principals:		Principals:	
Elementary	41,536	Elementary	43,470
Junior	44,861	Secondary[b]	44,664
Senior	47,896		
Assistant Principals:		Assistant Principals:	
Elementary	34,347	Elementary	42,742
Junior	37,958	Secondary[b]	45,783
Senior	39,758		
Nurses	22,219	Nurses	24,713
Librarians	28,390	Librarians	30,510
Counselors	32,132	Counselors	34,904

Source: Educational Research Service, Arlington, Virginia; and "1986-87 Staff Salary Report," Minnesota Department of Education, April 2, 1987.

[a]Program and subject area administrators include special, vocational, elementary, and secondary education directors and supervisors, as well as curriculum coordinators and reading consultants.

[b]Secondary principals and assistant principals include their middle school counterparts.

Table 3.10: Average Professional Salaries 1986-87

- **Salaries for certain support staff (nurses, counselors, and librarians) are about 8 percent above the national average.**

SUMMARY

Available spending data are not generally broken down by type or object of expenditure. Consequently, it is difficult to isolate particular factors that explain why Minnesota's educational spending is above the national average.

However, using staffing and salary comparisons, we were able to identify several items on which Minnesota spends more than the nation. These items include:

- **25 percent more special education teachers employed per 1,000 students than the national average;**

- **salaries for teachers and certain support staff that are 8 percent higher than average; and**

- **expenditures on capital outlay that have exceeded the national average by about 21 percent over the last decade.**

Administrative staffing and salary levels in Minnesota are below the national average.

On the other hand, there are a number of areas in which Minnesota spends less than average. For example:

- **Minnesota has 6 percent fewer administrators per 1,000 students than the national average and pays administrative salaries slightly lower than the national average.**

In addition, the best available data indicate that Minnesota has fewer licensed and unlicensed support services staff than nationally. However, the difference in unlicensed support staff may be the result of more private contracting than the rest of the nation and may not cause spending to be significantly lower in Minnesota.

SELECTED PROGRAM EVALUATIONS

Board of Electricity, January 1980	80-01
Twin Cities Metropolitan Transit Commission, February 1980	80-02
Information Services Bureau, February 1980	80-03
Department of Economic Security, February 1980	80-04
Statewide Bicycle Registration Program, November 1980	80-05
State Arts Board: Individual Artists Grants Program, November 1980	80-06
Department of Human Rights, January 1981	81-01
Hospital Regulation, February 1981	81-02
Department of Public Welfare's Regulation of Residential Facilities for the Mentally Ill, February 1981	81-03
State Designer Selection Board, February 1981	81-04
Corporate Income Tax Processing, March 1981	81-05
Computer Support for Tax Processing, April 1981	81-06
State-sponsored Chemical Dependency Programs: Follow-up Study, April 1981	81-07
Construction Cost Overrun at the Minnesota Correctional Facility - Oak Park Heights, April 1981	81-08
Individual Income Tax Processing and Auditing, July 1981	81-09
State Office Space Management and Leasing, November 1981	81-10
Procurement Set-Asides, February 1982	82-01
State Timber Sales, February 1982	82-02
Department of Education Information System,* March 1982	82-03
State Purchasing, April 1982	82-04
Fire Safety in Residential Facilities for Disabled Persons, June 1982	82-05
State Mineral Leasing, June 1982	82-06
Direct Property Tax Relief Programs, February 1983	83-01
Post-Secondary Vocational Education at Minnesota's Area Vocational-Technical Institutes,* February 1983	83-02
Community Residential Programs for Mentally Retarded Persons,* February 1983	83-03
State Land Acquisition and Disposal, March 1983	83-04
The State Land Exchange Program, July 1983	83-05
Department of Human Rights: Follow-up Study, August 1983	83-06
Minnesota Braille and Sight-Saving School and Minnesota School for the Deaf,* January 1984	84-01
The Administration of Minnesota's Medical Assistance Program, March 1984	84-02
Special Education,* February 1984	84-03
Sheltered Employment Programs,* February 1984	84-04
State Human Service Block Grants, June 1984	84-05
Energy Assistance and Weatherization, January 1985	85-01
Highway Maintenance, January 1985	85-02
Metropolitan Council, January 1985	85-03
Economic Development, March 1985	85-04
Post Secondary Vocational Education: Follow-Up Study, March 1985	85-05
County State Aid Highway System, April 1985	85-06
Procurement Set-Asides: Follow-Up Study, April 1985	85-07

Insurance Regulation, January 1986	86-01
Tax Increment Financing, January 1986	86-02
Fish Management, February 1986	86-03
Deinstitutionalization of Mentally Ill People, February 1986	86-04
Deinstitutionalization of Mentally Retarded People, February 1986	86-05
Management of Public Employee Pension Funds, May 1986	86-06
Aid to Families with Dependent Children, January 1987	87-01
Water Quality Monitoring, February 1987	87-02
Financing County Human Services, February 1987	87-03
Employment and Training Programs, March 1987	87-04
County State Aid Highway System: Follow-Up, July 1987	87-05
Minnesota State High School League,* December 1987	87-06
Metropolitan Transit Planning, January 1988	88-01
Farm Interest Buydown Program, January 1988	88-02
Workers' Compensation, February 1988	88-03
Health Plan Regulation, February 1988	88-04
Trends in Education Expenditures,* March 1988	88-05
Remodeling of University of Minnesota President's House and Office, March 1988	88-06
University of Minnesota Physical Plant, August 1988	88-07
Medicaid: Prepayment and Postpayment Review - Follow-Up, August 1988	88-08
High School Education,* December 1988	88-09
State Cost of Living Differences, January 1989	89-01
Access to Medicaid, Forthcoming	
Minnesota Housing Finance Agency, Forthcoming	
Participation in Public Assistance Programs, Forthcoming	

Evaluation reports can be obtained free of charge from the Program Evaluation Division, 122 Veterans Service Building, Saint Paul, Minnesota 55155, 612/296-4708.

*These reports are also available through the U.S. Department of Education ERIC Clearinghouse.